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On the Investigation of Causality Among Economic Policy Variables

Anticipated Job Satisfaction: Attitudinal Bias Among Women

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An Economic Forecast for Arkansas Through 1985

1984 Selected Arkansas and U.S. Economic Indicators

Arkansas Business and Economic Review

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ON THE INVESTIGATION OF CAUSALITY AMONG ECONOMIC POLICY VARIABLES

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INTRODUCTION

In June of this year, George Washington University hosted a conference sponsored by the American Assembly of Collegiate Schools of Business on the topic "U.S. Productivity and International Competitiveness." Emanating from the conference, a written report discussed certain research priorities that should be undertaken by business schools in the course of their scholarly activities. One such research priority was to develop causal models to help explain and test the complex interactions between economic variables that relate to productivity performance. This paper is one effort to accomplish that objective.[1]

Standard monetarist and Keynesian theory postulates that regulation of the money supply and fiscal expenditure alter the movement of interest rates in the economy. In the U. K. in the 1950s, Wm. Phillips discovered an inverse relationship between interest and unemployment, which subsequently became known as the Phillips Curve. With respect to these four policy variables—money supply, government spending, interest, and unemployment—much has been written by economists on the interreactions among them, and which should be taken as instrumental as opposed to dependent variables in the pursuit of economic stimulation.[2]

METHODOLOGY

The purpose of this paper is to study empirically the causal relationships among these key variables for the period December 1980 through December 1982, during which time the federal authorities instituted policies to control the high inflation and interest rate spiral of the late 1970s. Causality among the variables will be investigated for two reasons. First, it is anticipated that causality between the respective variables will validate current policy implementation (that is, monetary & fiscal). Second, it is hoped that causal analysis will give some indication of the power of certain policy variables in explaining economic developments. This type of analysis may then lend credence to new theories such as the dynamic or turnover view of unemployment, or may even prompt new thought on old ideas like the Phillips Curve—Natural Rate Hypothesis concepts.

The period chosen is exceptional for study, because the monetary policy promulgated by the Federal Reserve Board during that time purportedly was instrumental in decreasing inflation and interest rates, but at the same time the Phillips Curve was much in evidence. Much verbiage by government officials was devoted to the necessity for prudent fiscal management to work along with monetary policy to reverse the 1981 recession, but real results seemed to be largely elusive. It is well-known that government spending, as exhibited by the huge federal deficit, was not curtailed at all during the period in question.

One technique available to study causality among variables is path analysis. Path analysis, however, does have its limitations. While it does not claim to specifically discover causes, it can be used for testing a limited set of causal hypotheses, primarily by decomposing and interpreting linear relationships among variables. Two basic assumptions are necessary: (1)

that a weak causal order among the variables is known, and (2) that the relationships among the variables are causally closed.

The first assumption is straightforward. It simply states that a weak causal order exists between two variables, X_i and X_j, if it is known that X_i **may** affect X_j, but X_j does not affect X_i. The second assumption, causal closure, means that the covariation between two variables X and Y is not interfered with by some outside influence. Figure 1 (a) shows that X and Y, not being influenced by Z, are therefore causally closed. Figure 1 (b) shows that X and Y are both influenced by Z and therefore are not causally closed to outside influence with respect to their covariation. Causal ordering is depicted by an arrow, while closure is depicted by the **absence** of a line between two variables. Finally, path coefficients are derived from regressions run on the various variables to give the magnitude of changes in the dependent variable for unit change in the independent variables.

FIGURE 1a.

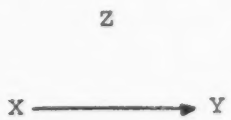
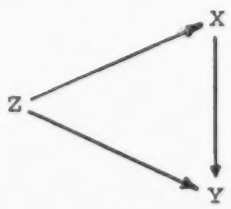


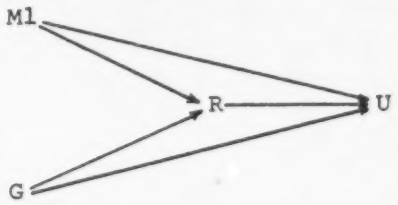
FIGURE 1b.



Explicit statements of the above assumptions lead to a general path analysis model, illustrated by either path diagrams or linear equations. In the present study, a hypothesis is constructed whereby unemployment is taken to be the dependent variable, while the money supply, government spending and the interest rate are action variables.

The general model is:

H_1^o: The rate of Unemployment (U) is a function of the money supply (M1), government spending (G), and interest rates (R):[3]



or in equation terms (where M1 = X_4, R = X_3, G = X_2, and U = X_1)

$$X_4 = e_4$$
$$X_3 = P_{34}X_4 + P_{32}X_2 + e_3$$
$$X_2 = e_2$$
$$X_1 = P_{13}X_3 + P_{14}X_4 + P_{12}X_2 + e_1$$

Note that, in the diagram, weak causal order is assumed between M1 and R, G and R, R and U, M1 and U, and G and U. That is, it is assumed that changes in the money supply affect interest rates and unemployment, the amount of government spending affects interest rates and unemployment, and interest rates affect unemployment.

The first two assumptions are easily recognized from standard monetarist or Keynesian economic theory. The last assumption exemplifies the Phillips Curve, but rather than simply having a Phillips Curve covariance effect between R and U, here a causal order is assumed from R to U. Substituting the latent variables and the X_i's in the general model yields the more complete system:

To obtain path coefficients P_{ij}, the following multiple regressions are run:

Regression 1 = U with M1, R, G

Regression 2 = R with M1, G

Regression results are given in Table 1.

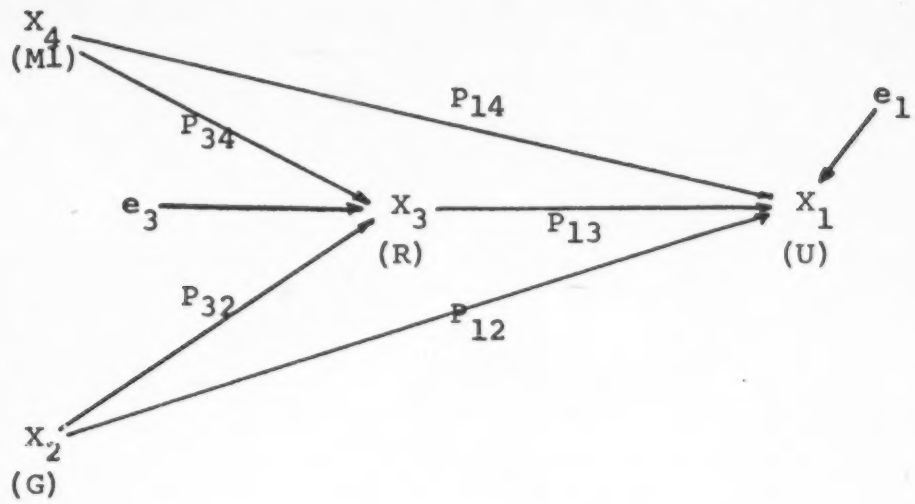


TABLE 1

(a) **General Model**

Bivariate Relationship	Total Covar. (A)	Causal: Direct (B)	Causal: Indirect (C)	Causal: Total (D) = B + C	Noncausal (E) = A-D
X_3X_4	r_{34}	P_{34}	none		
X_3X_2	r_{32}	P_{32}	none		
X_1X_4	r_{14}	P_{14}	$(P_{34})(P_{13})$		
X_1X_3	r_{13}	P_{13}	none		
X_1X_2	r_{12}	P_{12}	$(P_{32})(P_{13})$		

e_1 = 1 - R^2 (from Regression 1) e_3 = 1 - R^2 (from Regression 2)

(b) **Regression Results**

X_3X_4	-.93308	-.88326	none	-.88326	-.04982
X_3X_2	-.49836	-.11469	none	-.11469	-.38367
X_1X_4	.95867	.76841	(-.88326)(-.18930) = .16720	.93561	.02306
X_1X_3	-.92192	-.18930	none	-.18930	-.73262
X_1X_2	.45948	.03136	(-.11469)(-.18930) = .02171	.05307	.40641

$e_1 = 1 - .9621^2$ $e_3 = 1 - .9388^2$

$= 1 - .92564$ $= 1 - .88135$

$= .2727$ $= .3445$

INTERPRETATION OF RESULTS

The first step in the interpretation of path analysis results is the assessment of the completeness of each relevant subsystem by looking at latent variables. The latent influences on R and U (e_3 and e_1) show that only 12% of the variation in interest rates and 7% of the variation in unemployment remain unexplained by the causal relations explicitly included in the model. This certainly appears to be strong support for the power of the argument variables in explaining movement in the dependent variables.

To identify the effects of the money supply and government spending on interest rates, and the effects of the money supply, government spending and interest rates on unemployment, one considers all the causal effects columns (B, C, & D) in Table 1, and then compares them to the total covariation between pairs of variables, as represented by simple r, the bivariate correlation between the two pertinent variables, taken from the matrix of simple correlations from multiple regression 1, column A. Any difference between the total causal effects and the total covariation is then considered to be noncausal, column E.

Consider first the causal effects on interest from M1 and G. Row X_3X_4 shows that if M1 is changed by one standard deviation unit, the accompanying change in R is negative .883, while row X_3X_2 shows that a one standard deviation change in G is accompanied by a negative .115 change in R. The noncausal effects on R from M1 and G are -.0498 and -.384 respectively.

This seems to indicate that the effects of M1 and G on R are both causal and spurious. In both cases (X_3X_4 and X_3X_2), the causal effects are all direct or genuine. There are no indirect effects. M1, however, seems to have a much greater impact on R than G movement, since when M1 changes, R changes inversely by -.883, but when G changes, R moves inversely by only -.115. Could this be support for monetarists' contentions that monetary regulation is more important than fiscal stimulation for economic impact?

Lastly, note that in the M1-R relationship, very little of the original correlation is spurious (-.0498 vs. -.933), while in the G-R case, **most** of the original association is deceptive (-.384 vs. -.498).

Consider now the effects on unemployment from M1, G and R. From row X_1X_4, it can be seen that the causal effects of M1 on U are both direct (.768) and indirect (.167), because the covariation between the two variables is decomposed into that which is mediated by R and that which is not. In row X_1X_3, however, there is no intervening mediation between R and U, and so the total causal effect of -.189 is direct. Row X_1X_2 again shows a mediating effect—this time between G and U by the variable R. Here the direct coefficient is .031 and the indirect .022.

In all three of these last cases, some noncausal effects exist between the dependent variable U and the three predictors.

With respect to the relative size of the coefficients in the last three rows, note the largest direct causal effect occurs between U and M1 (X_1X_4)—.768—and there is quite a dramatic drop to the next causal coefficient, X_1X_3, at -.189. The direct causal between G and U (X_1X_2 at .031) seems to be relatively insignificant. Similarly, the largest indirect coefficient is between M1 and U (.167), while the indirect of .022 between G and U is again fairly insignificant.

Contrary to these causal coefficients, the noncausal ones exhibit just the opposite tendencies, and perhaps logically so. The noncausal figure for M1 and U is .023, that for R and U is -.733, and G and U is .406. All this seems to be saying is that if most of a set of variables effects are largely causal, then the noncausal effects would be small, and vice versa. These same tendencies can be seen in comparing rows X_3X_4 and X_3X_2.

CONCLUSIONS

While at this point in time probably most economists would agree that **both** monetary and fiscal policy are important factors in manipulating the economy, the author suspects that the old controversy over which one is more important still lives on in academic circles. The implications of this research, then, should please some, appease others, and upset many. Perhaps it would be prudent to point out again that path analysis such as this is not a procedure for demonstrating **specific causality**. Rather, it is a method for tracing out the implications of a set of causal assumptions which the researcher is willing to impose upon a system of relationships. With this in mind, it must be recognized that the following interpretations may be ambiguous in light of the preliminary tentative assumptions in the model.

The first point of observation, arising from the regression of interest on the money supply and government spending is that, while an increase in the money supply and government spending both cause a decrease in interest rates, the influence of the money supply change is much greater than the spending change. The fact that this influence is all causally **direct** heightens the point. There are however, some small spurious effects coming from influences outside the model. An interesting fact, though, is that the model shows a **negative** correlation between the money supply and interest rates. While this lends credence to classical economic theory, it flies contrary to more recent studies and current opinion that lax monetary policy fuels inflation and **higher** interest rates.

From the second regression, results show that, as in the prior case, the money supply was much more instrumental in affecting unemployment than either interest rates themselves or government spending. This is exhibited not only by the direct causal coefficients, but also by the indirect numbers. As for the interest rate—unemployment connection, the negative coefficient of -.189 fully ratifies the inverse Phillips Curve relationship that prevailed during 1981-82.[4]

Over the past two years many writers have accused the Federal Reserve of, either consciously or not, letting the money supply wander erratically—the implication being that the Fed has not been conscientiously following its own prescribed "quasi-monetary rules," thereby stemming high inflation and interest rates.[5] From all indications in this study, this controversy can now be put to rest. Results herein show that monetary policy during 1981-82 was the **primary** action variable against interest rates, and that the rate fell from a peak of 21½% in December of 1980 to less than half that figure by the end of 1982. It is well-known that, on the fiscal side, the government was unable to decrease spending to accommodate monetary policy.

An interesting question, then, is do we need to concern ourselves with the federal deficit as much as we have over the last two years? This study shows that fiscal cooperation was not needed to accomplish certain economic objectives. Perhaps public decision-makers should simply concentrate on refining monetary policy for future economic stimulation or detraction.

[1]The author would like to thank Dr. David Drew, the Claremont Colleges, Claremont, California, for his helpful assistance in the development of this paper.

[2]One needs read the Wall Street Journal for only a few weeks for a sample of the ongoing debate between monetarists and fiscalists about which of their pet theories is more important to stimulate or contract the economy.

[3]M1 is generally defined as demand deposits plus currency in the hands of the public. General interest rates are exemplified in this study by the Prime Rate. The e_i figures are latent variables, representing all the residual causes of variable i, while the P_{ij} are constants or "path coefficients." e_i calculations for X_i are given by $\sqrt{1-R^2}$, where the multiple R is that part of a regression equation in which X_i is the dependent variable and all causally prior variables are used as predictors. Standardized Betas are used for the path coefficients. For detailed explanation, see Wright, Sewell: Theory of Path Coefficients: A Reply to Niles' Criticism, Genetics, 8: pp. 239-55, 1923. Figures taken for this research for all variables come from various editions and statistical charts of the Federal Reserve Bulletin.

[4]While the author recognizes that the original concept of the Phillips Curve has been supplanted by the Natural Rate Hypothesis, there can be little doubt that the movement of interest rates and unemployment over 1981-82 followed classical Phillips Curve lines. Elsewhere, (see "The Impact of the Monetary Control Act of 1980 on Interest Rates" in *Business & Public Affairs*, Spring, 1984) this author has noted that current interest rates will turn around again, and increase to higher levels in the next few years. Evidence of this is now visible in the economy, and it can also be seen that unemployment has begun to decrease from the highs of 1982. Thus, we see Phillips Curve movement again. The point is, recent experience readily supports Phillips Curve theory as it was originally designed.

[5]See, for example, "We'd Better Pay Attention to M1", by Lawrence K. Roos, Wall Street Journal, April 7, 1983.

ANTICIPATED JOB SATISFACTION: ATTITUDINAL BIAS AMONG WOMEN

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As in times of war when windows of opportunity were opened, contemporary American women are opting for employment. Enticed by the money, women are also drawn to jobs and careers by the peculiar sense of self-worth and value that society reserves for those who are more than "just" housewives.

When a student accepts a particular position tacit as well as actual contracts are implied between prospect and employer. The degree of job satisfaction a woman experiences in her first years of service will be directly related to how fairly she feels treated in terms of those contracts. In particular, it has been suggested that individuals compare what they bring to a job and the corresponding rewards with salaries and perquisites thought available to others in similar circumstances. Job satisfaction issues then, in part, from the judgments based upon that continuing observation and evaluation. There is evidence that the sex of employees influences such perceptions of equity.

Much has been written about the part pay plays in the motivation of employees. Most that has been reported surrounds group behavior of males or males and females. Considering that the labor market consists of an increasing number of women having ever greater skills, a more careful consideration of their attitudes seems appropriate.

Socio-political forces have precipitated dramatic changes affecting working women and their jobs. Each legal opinion and legislative action has sought to alter working conditions or to foster more equitable treatment. Considering these occurences, what is the attitude of contemporary women as they consider their job prospects? Specifically, how positive are women about finding compatability with various aspects of their employment? Are some women more optimistic than others or can they be categorized at all? To shed some light on these questions a survey was taken.

THE SURVEY

A sample was taken of junior and senior level university women enrolled in courses offered by a college of business. Among that group of respondents, 253 anticipated beginning work with a new employer following graduation, were citizens of the United States, and were business majors. Because of the focus of the inquiry, other responses were omitted.

Briefly, data were gathered from a two part questionnaire distributed through respondents' classes. An initial part included qualification questions as well as demographic background data consisting of age, race, major course of study, grade point average, marital status, whether one anticipated working full-time or part-time, and cumulative full-time work experience. A second part consisted of a list of twenty job factors. Coeds were asked to indicate on a six point scale how satisfied they expected to be with each job factor in their new positions. If a respondent expected to be "totally dissatisfied" she circled "1"; if "totally satisfied", a "6". With "3" representing "dissatisfied" and "4" "satisfied" no neutral or undecided category was provided thus forcing an answer.

THE FINDINGS

Responding females ranged from eighteen to thirty-seven years of age (Table 1). the greatest number were white followed by black, American Indian, Eskimo or

Aleut, Spanish origin, and "other" (Table 2). While the most popular choice was marketing, all majors were represented (Table 3).

It was determined that grade point averages ranged from 2.00 to 4.00 on a 4.00 scale. As might be expected most fell into the mid range (Table 4).

While singles were the predominate group, there was also a representation of those married, widowed and divorced (Table 5). The vast majority anticipated a full-time career, but some also planned to utilize their skills on a part-time or intermittent basis (Table 6).

The group, as a whole, expected to be somewhat satisfied with working conditions in their anticipated jobs (Table 7). Greatest satisfaction was expected with opportunities for travel and recreation.

An examination will now be made of expected satisfaction in terms of demographic categories.

TABLE 1
Profile of Female Junior and Senior Business Majors by Age

Age	n	%
18	5	1.6
19	15	5.9
20	50	23.7
21	76	30.0
22	56	22.0
23	15	6.0
24	3	1.2
25	7	2.8
26	2	0.8
27	0	0.0
28	1	0.4
29	4	1.6
30	3	1.2
31	2	0.8
32	1	0.4
33	0	0.0
34	2	0.8
35	1	0.4
36	0	0.0
37	1	0.4
Total	253	100.0

Source: Original

TABLE 2
Profile of Female Junior and Senior Business Majors by Race

Race	n	%
White	207	81.8
Black	39	15.4
American Indian, Eskimo, or Aleut	2	0.8
Spanish Origin	4	1.6
Other	1	0.4
Total	253	100.0

Source: Original

TABLE 3
Profile of Female Junior and Senior Business Majors by Course of Study

Major Course of Study	n	%
Finance	10	3.9
Insurance	1	0.4
Real Estate	3	1.2
Marketing	55	21.7
Fashion Marketing	10	3.9
General Business	7	2.8
Accounting	28	11.1
Management	34	13.4
Information Systems	18	2.1
Personnel and Industrial Relations	23	9.1
Personnel and Organizational Behavior	26	10.3
Business Education	3	1.2
Production and Operations Management	5	2.0
Other	30	11.9
Total	253	100.0

Source: Original

TABLE 4
Profile of Female Junior and Senior Business Majors by Gradepoint Average

Gradepoint Average	n	%
1.50 - 2.49	40	14.8
2.50 - 3.49	157	62.1
3.50 - 4.00	56	22.1
Total	253	100.0

Source: Original

TABLE 5
Profile of Female Junior and Senior Business Majors by Marital Status

Marital Status	n	%
Married	44	17.39
Single	199	78.66
Widowed	2	0.79
Divorced	8	3.16
Total	253	100.00

Source: Original

TABLE 6
Profile of Female Junior and Senior Business Majors By Work Plans

Work Plans	n	%
Full-time Career	242	95.7
Part-time or Intermittent	11	4.3
Total	253	100.0

Source: Original

TABLE 7
Value Means for Total Sample by Expected Job Factors

Job Factor	Mean
Advancement Opportunity	4.4281
Fringe Benefits	4.3267
Community Size and Kind	4.2749
Company Reputation	4.3293
Freedom in the Work Place	4.3040
Geographical Location	4.3400
Good Boss	4.4240
Industry Prestige	4.2016
Interesting Work	4.7080
Job Security	4.4280
Position or Title	4.1880
Pay (Absolute Amount)	4.3173
Reward Based on Merit or Productivity	4.2520
Reward Based on Seniority	4.8440
Size of Company	4.2008
Travel and Recreation	4.0520
Vocational Training	4.1040
Working Conditions	4.5520
Work with People	4.6787
The Work Itself	4.8400

Source: Original

RACE, MAJOR, GRADE POINT AVERAGE, AND CAREER PLANS

There was no association found between women and their expected satisfaction with the job factors provided when they were grouped according to race, major course of study, grade point average or whether they anticipated working full-time or part-time/intermittently following graduation. No racial grouping of these women, then could be characterized as having preconceived notions concerning its particular work role. Similarly, neither those majoring in high demand fields (say accounting or information systems) nor those with higher grade point averages seem collectively to expect greater job satisfaction than others.

For those who might assume that women seeking a full-time career somehow have different perceptions from those seeking part-time employment, an interesting finding emerges. When grouped according to career plans, there was no distinction that could stereotype any of these women so far as expected satisfaction on the job was concerned.

AGE

There was an association indicated between the ages of respondents and their expected satisfaction levels with two job factors: (1) good boss and (2) reward based on merit or productivity.

Good Boss. Those women younger than twenty-two years offered mixed response, but those twenty-three years and older expected to be "very" to "totally" satisfied with the type of boss they would encounter.

Responses of those under twenty-two may reflect the manifold influences parental dominance can exert during adolescence, for the only model of "superior/subordinate" relationships most have substantially known by that time has come from experiences shared with parents. There may be a tendency, then, for younger respondents to transfer parental

attributes to the hypothetical "boss" and to project related outcomes to themselves. Not so encumbered, those over twenty-three were prepared to make more adult estimates raising the chances that agreement would come from within the group.

Those over twenty-three generally should have less reason to harbor unrealistic expectations. Longevity, if nothing else, allows exposure to a richer variety of personalities. To the extent this is found true, one may conclude that those in excess of twenty-three should have acquired a corresponding ability to adapt more flexibly to interpersonal situations than those younger and to discount idiosyncrasies which may have disturbed them earlier. In an environment where an increasing number of women are being forced into second income postures by family circumstance or find themselves carrying sole support, the potential benefits of employment can quickly outweigh the problems. What disrupts the work of others becomes tolerated as a mere annoyance.

Reward based on merit or productivity. Women eighteen to twenty-three years of age exhibited a mixed response to reward based upon merit or productivity as did those over twenty-nine. Those women twenty-four to twenty-nine years of age expected to be "very" satisfied with the portion of their pay they believed would be based upon merit or productivity. A conjectural explanation for this "generation gap" might be considered.

It can be assumed that younger women have had little opportunity to hold jobs allowing the discretion necessary for merit or productivity pay. Further, older women are more likely seeking training because of dead end jobs or because they are beyond child bearing and have had similar work experience.

The middle group (twenty-four to twenty-nine) may have benefited by more sophisticated role models than those older and certainly a greater variety of models than those younger. Thus they would be better able to recall employer expectations and relate to opportunities than either of the other groups.

MARITAL STATUS

There was an association found between the marital status of respondents and two factors: (1) freedom in the work place and (2) travel and recreation. The strongest correlations were found after combining responses designated "single," "widowed," and "divorced" into one category we will term "unmarried." Therefore, two designations are used here, married and unmarried, with the latter including those designating themselves single, widowed and divorced.

Freedom in the work place. Married women were mixed in their responses to how much freedom they expected on the job. Those unmarried expected to be somewhat dissatisfied.

This pessimism among the unmarried may be an outgrowth of the relatively few constraints placed on the mobility and living freedom of the unmarried. Given that the vast majority of unmarried respondents had never been married, it may be assumed they also had fewer family responsibilities and more interests beyond home life than their married counterparts. Being accustomed to greater discretion in lifestyle, they may have seen the constraints or structure imposed by a business career inhibiting and thus were pessimistic toward adapting to those new restraints.

Travel and recreation. Unmarried women were mixed in their reported feelings about travel and recreation opportunities. Married respondents, on the other hand, expected to be somewhat satisfied with the opportunities afforded them.

It could be that married respondents, having home responsibilities, find enjoyment and fulfillment in their families. Thus, travel per se is secondary in impor-

tance and pleasure in recreation is sublimated to the wishes and desires of the family unit. This, coupled with the fact that virtually all married women are in a second income posture and either do not have to or cannot relocate, may have influenced their particular response in this regard.

CUMULATIVE FULL-TIME WORK EXPERIENCE

There was an association found between the cumulative work experience of women completing the questionnaire and their expected satisfaction related to freedom in the work place. As total work experience increased, the expected satisfaction level also rose.

A reasonable explanation for this might be that as women accumulate full-time work experience they are better able to adapt to constraints on behavior indigenous to the organizations of which they have been a part. If this is considered with the fact that freedom in the work place is generally related to work experience and capacity, it becomes clear why those with greater full-time work experience would provide a more unified response.

CONCLUSIONS

Women were queried concerning how satisfied they expected to be with various aspects of their initial jobs following graduation. It was found that married women had decidedly different feelings about particular aspects of their jobs than those expressed by unmarried women. While satisfaction with specific job factors did not move with age, it did vary within age groups. Further, it was determined that as the amount of cumulative full-time work experience increased so did the level of expected satisfaction increase with respect to freedom in the work place and reward based on merit or productivity.

Having considered one aspect of expectations women have prior to entering employment, a few observations might be made. Edward Lawler has suggested that employees' attitudes are more positive prior to entry than following employment. Negative attitudes result when the expectations of individuals are to some degree unmet. Some workers adjust and become productive. Others disrupt and leave.

It might be suggested that age, marital status, and cumulative full-time work experience may provide clues to the maturity of judgment women bring to job search decisions and how realistic their expectations are likely to be. Female role models might be included early in the interviewing process to candidly prompt questions and discussion for example. In any event, adjustment of recruiting and orientation technique to accommodate age, marital status and cumulative full-time work experience may be in order.

FOREIGN DIRECT INVESTMENT PATTERNS IN ARKANSAS: WHAT ARE THE ISSUES?

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INTRODUCTION

From the very beginning, economic development in the United States has been fueled with the aid of foreign investment. Foreign investors financed the development in many sectors of the economy and, as recently as 1914, foreign direct investment (FDI) in the United States was twice the size of investments by Americans abroad. However, during the post-World War II period U.S. investment abroad grew rapidly so that in 1979 U.S. Direct Investment Abroad was four times FDI in the U.S.: $192 billion versus $52 billion, and by the end of 1982, the ratio had fallen to 2 to 1: $221 billion versus $102 billion. During 1982 FDI in the U.S. grew by over 13 percent while direct U.S. investment abroad declined by 2 percent. Moreover, over the 1981-82 period the dollar increase in U.S. direct investment abroad ($7 billion) was less than one-fourth the size of FDI in the U.S. ($33 billion).

WHAT IS FDI?

Foreign direct investment occurs in the United States when a foreigner has an interest of 10 percent or more in a U.S. based firm. This enterprise is called a U.S. affiliate of the foreign company. Ownership (or control) of less than 10 percent is defined as indirect or portfolio investment. The distinction between direct and portfolio interests centers on the issue of control. The most obvious example of FDI occurs when a firm sets up a wholly-owned subsidiary abroad, but FDI may also involve a joint venture agreement where the foreign-based firm has more than a 10 percent share. Thus, a foreign firm with extensive portfolio interests may have much greater investment commitments in the U.S. than a firm controlling several U.S. affiliates; nevertheless, only the latter represents FDI.

Over the last decade the book value of foreign direct investors' equity in their U.S. affiliates has grown at an annual real rate of nearly 20 percent and most of this activity, over 70 percent, has been in three areas: Manufacturing (with the Chemicals industry being most important), Petroleum, and Trade (see Table 1). During the 1970's, employment in these U.S. affiliates grew at an annual rate greater than 10 percent and by 1979 accounted for nearly two million workers, or about 1.8 percent of total employment (see Table 2). The distribution of employment by states shows that five states; California, New York, New Jersey, Illinois, and Texas account for

TABLE 1
Foreign Direct Investment Position in the United States, by Industry, 1982

Industry of U.S. Affiliate	Position, Year end 1982 (Billions of Dollars)
Manufacturing	32.19
Food Products	5.43
Chemicals	9.29
Metals	4.57
Machinery	5.04
Other	7.87
Petroleum	20.49
Trade	20.63
Finance	8.39
Insurance	6.46
Real Estate	5.87
Other	7.83
All Industries	101.84

Source: *Survey of Current Business*, August 1983, p. 36.

40 percent of all such employment. For Arkansas and the surrounding states, one quarter of a million workers representing nearly two percent of total employment in the region in 1979 were employed by U.S. affiliates of foreign owned firms. Most of the FDI (over 80 percent) comes from seven countries; Netherlands, United Kingdom, Canada, West Germany, Japan, France, and the Netherland Antilles.[1]

Since 1970 a rapid expansion of foreign banking into this country has also taken place. By 1982, 175 foreign banks operated a total of 441 offices with assets in excess of $250 billion. Over 60 percent of these assets are held by banks from three countries; Japan ($88.9 billion), United Kingdom ($46.2 billion), and Canada ($23.4 billion).

Reasons for this rapid growth mirror the reasons for U.S. bank expansion in foreign markets during the 1960's. As foreign corporations' activity in the U.S. increased, foreign banks followed to sustain and expand corporate relationship originally established in their home countries.

The dominant role of the dollar in international finance has made a dollar-based operation for a bank advantageous in doing international business. Finally, and certainly not least important, changes in the regulatory climate helped attract foreign banks. The enactment of the International Banking Act of 1978 (IBA) embodied the principle of national treatment of foreign banks operating in the U.S. Under national treatment, the IBA restricts expansion of interstate activities by foreign banks, subjects these banks to Federal Reserve requirements and interest rate regulations, requires deposit insurance for those involved in retail banking, applies restrictions on nonbank activities of the Bank Holding Company Act to foreign banks, and allows access to discount window and payment services provided by Federal Reserve Banks.[2]

WHY DOES FDI OCCUR?

Theories explaining international investment center on an individual firm's response to economic imperfections present in international markets.[3] For example, one theory argues that countries with rel-

TABLE 2
Gross Book Value and Employment of U.S. Affiliates, by Region and Selected States, 1979

	Gross Book Value (Billion of Dollars)	Employment (Thousands of Workers)	% of Region Employment
New England	$ 2.58	92.08	1.69
Mideast	12.09	388.12	2.20
Great Lakes	12.06	308.37	1.79
Plains	3.40	57.70	1.16
Southeast	33.02	500.29	1.82
Arkansas	0.24	12.93	1.72
Louisiana	4.87	32.39	2.17
Mississippi	.65	8.11	0.97
Oklahoma	1.08	13.59	1.24
Tennessee	1.83	36.55	2.04
Texas	10.52	96.78	1.72
Arkansas Seven State Region	20.26	225.58	1.66
West	16.15	261.21	1.73
United States Total	$93.73	1,642.13	1.75

Source: *Survey of Current Business*, May 1981, pp. 39 and p. 51.

atively abundant capital and relatively low interest rates will tend to export capital to higher interest rate (relatively scarce capital) countries. This view has received mixed reviews in explaining the post-World War II rapid growth in FDI because interest rate differentials do not explain why establishment of control (ownership) over the production facilities by a foreign firm is necessary. In fact, one might argue that the foreign control itself may reduce profits since the foreign owner might be at a relative disadvantage resulting from lack of knowledge of local markets or business practices.

Other explanations of international investment center on a firm's response to different market imperfections. First, the existence of trade barriers (distance, tariffs, quotas, and/or import licensing) may encourage FDI as (1) a defensive reaction by a firm to markets being currently served by exports and trade barriers are increased and (2) a positive response to profit opportunities in "more-protected" markets. Studies attempting to identify the importance of trade barriers have had mixed results. Some authors have found statistical support for the role of tariffs in international investment,[4] while others have found tariff rates to be statistically insignificant.[5] Results of survey and questionnaire studies, however, consistently emphasize the importance of tariff policy in explaining FDI. For example, a survey of chief executives by the U.S. Conference Board found 64, of the 76 questioned, mentioning trade barrier policies as being important in their decision to move facilities abroad; another survey of 38 European companies operating in the United States found that the existence (or threat) of trade barriers was an important motive for these companies moving into U.S. markets.[6]

Imperfections in international markets for labor resources may also have a casual impact on direct investment moving to the source of labor inputs. This appears to be particularly true in "mature" industries where production techniques have become standardized. The movement of assembly operations of electronics components, textiles and footwear to offshore locations such as Korea, Taiwan, or Hong Kong are suggestive instances of this phenomenon.

A more popular view places emphasis on those functions that might be carried out by market transfers but have been taken over by intra-firm transfers. This approach (called internalization or appropriability) applies to tranfers of technology, information, management or administrative skills.[7] This transfer factor arises out of the attempt to maximize the rate of return on technology (or some other factor) developed within the firm. Developing new technologies (information) is costly, but, once developed, its transfer into other markets can occur without significant cost to the parent firm. Moreover, this approach suggests that it is more efficient to transfer worldwide within firms than through the market because there is less likelihood of new technologies (information) being stolen by outsiders.

COUNTRIES ACTIVE IN DIRECT INVESTMENT

United Kingdom, West Germany, France and Canada account for almost 65 percent of the manufacturing FDI in the seven-state region and these four countries accounted for over half the FDI activities in Arkansas (see Table 3). To a limited degree the figures in Table 3 misstate the identity of foreigners involved in FDI. This results from classifying the foreign parent on the basis of the first foreign person in the ownership chain of the U.S. affiliates. This person may not be the ultimate beneficial owner (UBO) of the enterprise. The UBO is that person in the ownership chain, beginning with the foreign parent, that is now owned more than 50 percent by another person. The country

TABLE 3
Number of Foreign-Owned U.S. Manufacturing Firms by Country and State, 1977

	Belgium	Canada	Curacao	France	Japan	Netherlands	Sweden	Switzerland	U.K.	W. Germany	Other	1977 Total	% of U.S.
Arkansas	1	3	--	3	2	1	--	--	3	3	5	21	0.6
Louisiana	5	7	1	6	--	10	1	4	23	9	18	74	2.2
Mississippi	--	5	--	--	--	--	--	--	1	3	--	9	0.3
Missouri	--	4	--	5	1	1	2	--	6	13	--	32	0.9
Oklahoma	--	2	1	4	1	2	--	1	10	3	1	25	0.7
Tennessee	3	9	--	1	3	7	2	6	18	14	5	68	2.0
Texas	5	26	23	44	8	15	7	10	35	32	12	217	6.3
Region	14	56	25	63	15	36	12	21	86	79	39	446	13.0
United States	66	535	41	294	203	234	162	141	817	710	230	3,433	

Source: Jeffrey Arpan and D. Ricks, Directory of Foreign-Owned Manufacturers in the United States, (Georgia State University, Atlanta; 1st edition, 1974 and 2nd edition, 1979).

of the UBO may be the same as the foreign parent, a different foreign country, or even the United States. When the foreign parent is not owned more than 50 percent by another person, then the foreign parent and UBO are the same. The Bureau of Economic Analysis conducted an additional study which enabled more than 90 percent of the investment outlays to be identified by UBO. Over the 1979-80 period, only 13 percent of the total outlays were for investments for which UBO and foreign parent countries differed and, when classified by UBO, two countries, Netherlands and Curacao (Netherlands Antilles) had their total investment outlays reduced by over one billion dollars each. The two major countries of UBO which gained in this examination were Canada (with one billion dollars increase) and OPEC countries (with 400 million dollars more). The Canada differences reflect nearly 100 real estate investments made through Netherlands holding companies; most of the OPEC outlays, amounting to about 2 percent by all investors, were in real estate areas also. The advantages to UBO of holding their U.S. investments indirectly through these countries include: (1) reduction in tax liabilities, (2) avoidance of regulatory constraints, and (3) protection of investor privacy.

WHY WORRY ABOUT FDI?

Recent concerns voiced about foreign purchases of U.S. companies fall into three areas. First, the public's reaction to foreign ownership of U.S. real estate. This is probably the most emotional of all issues regarding FDI. The essence of the argument is that "God (or nature) has provided this land for 'us' and it is for 'us' to have it." A 1982 poll of 500 opinion leaders showed 54 percent in favor of laws restricting foreign land ownership.[8] The intensity of such beliefs is tempered, however, by the fact that total foreign holdings of real estate amounts to less than one percent of total U.S. land (13.5 million acres at the end of 1982). Foreign ownership of timber and forest land represents over half of the total foreign land holdings with pasture land (22 percent), and crop and orchard land (13 percent) accounting for the remaining holdings. The relatively heavy concentration of holdings of forest land is reflected in individual state data where timber production is an important component. These include Maine where more than 14 percent of privately owned land is owned by foreigners, Georgia (3 percent), Alabama (2 percent) and Oregon (2 percent).[9] In addition, there seems to be no economic reason to treat ownership of natural resources (like land) differently from other types of resources (like capital). If a resource (natural or capital) is worth more to a foreigner than to a domestic citizen, it adds to the citizen's wealth (and ultimately, income) to sell the resource. This increased financial wealth can then be used to purchase other income earning assets. Thus, the FDI will generate economic gains to both domestic citizens and the foreign citizen.

A second issue is the ownership of a domestic firm by a foreign government. U.S. businesses now controlled by foreign governments include : Kennecott (British Petroleum), American Motors (Renault), Texasgulf Inc. (Elf-Aquitaine-France) and Santa Fe International (Kuwait). State-run companies are often distrusted because it is believed that they may act for reasons of state instead of profit and that their "deep pockets" give them an unfair competitive advantage over privately owned firms. Recently, the Committee on Foreign Investment, headed by Marc Leland, Assistant Secretary of the Treasury for International Affairs, studied the takeover of Texasgulf Inc. by Elf-Aquitaine, the nationalized French oil company. "No bank here could own Texasgulf but the French government owns the outfit that owns Texasgulf, and it also owns banks," declares Leland.[10]

An additional aspect of foreign state control is tied to issues of national security. Legislation to expand executive branch authority in halting foreign government takeover of U.S. firms is currently under consideration as the Foreign Investment Reorganization Act of 1983 (H.R. 600). This act would prohibit a foreign government from obtaining controlling interest in companies in industries like defense, communications, energy, high technology, and transportation. One particularly sensitive area concerns possible transfers of nuclear technology. An example of a takeover that might have been prohibited under such a law was the 1981 purchase of Santa Fe International, a company involved in nuclear engineering and construction, by Kuwait Petroleum Corporation for $2.8 billion.

A final issue arises from complaints that while foreigners are welcomed to make investments here, U.S. firms are limited from making investments in other countries. This reciprocity issue is most acute in our relations with Canada which, under its Foreign Investment Review Agency, has the power to screen new investments by foreign firms to see if they are to be of "significant benefit to Canada." Also recent attempts to "Canadianize" particular industries (for example, office equipment and energy) have evoked retaliatory moves in Congress and within the Reagan Administration. Proponents of reciprocity argue that it may serve as a catalyst for achieving more equitable treatment of U.S. firms operating in other countries. Unfortunately such a policy is very costly to administer since different rules are in effect for each country's investors.

CONCLUSIONS

The record on FDI is clear: rapid growth over the last decade with prospects for continued growth during the 1980's. Still foreign investment represents a "two-way street" to both foreign investors and the domestic (host) economy. Government policy supporting the same equitable treatment to foreign investors as to domestic ones should be encouraged and promoted.

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[1]"Corporate Tax Haven in Netherlands Antilles Is Bracing for a Disaster," *Wall Street Journal*, October 11, 1982, p. 1.

[2]For a more detailed description see "The International Banking Act of 1978", Board of Governors of Federal Reserve System, September 1980.

[3]Thomas Parry, *The Multinational Enterprise* (JAI Press Inc.: Greenwich, CN, 1980) pp. 19-21.

[4]Thomas Horst, "The Industrial Composition of U.S. Exports and Subsidiary Sales to Canadian Markets," *American Economic Review*, (March 1972), p. 37.

[5]D. Orr, "The Industrial Composition of U.S. Exports and Subsidiary Sales to Canadian Markets: Comment, *American Economic Review*, (March 1975), p. 234.

[6]Simon Webley, *Foreign Direct Investment in the United States: Opportunities and Impediments* (London: British-Morth American Committee, 1974), p. 26-27.

[7]Steven P. Magee, "Information and the Multinational Corporation: An Appropriability Theory of Direct Foreign Investment," in Bhagwait, J. (ed.) *The New International Economic Order* (MIT Press: Cambridge, Mass., 1977) pp. 317-340.

[8]"Foreign Investment in America: Is It Helping or Hurting," *Wall Street Journal*, October 21, 1982, p. 23.

[9]As of 1979 around 46 thousand acres of land (representing less than 0.3 percent of farmland) in Arkansas were owned by foreign-owned firms.

[10]"Innocent Abroad?" *Barron's*, February 1, 1982, p. 26.

ON PROPER TAXATION: THE ADVICE OF ADAM SMITH

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Two things in life that are certain in our times are taxes and the debate over taxes. Death is not considered by most of us in the short-run. It is becoming increasingly apparent that a tax increase is inevitable in the near future regardless of which party is in power in Washington. The massive deficit in the Federal Budget requires such action whether it is disguised as tax reform or as a new approach to taxation. The primary issues will be what form the tax increase will take and who will bear the burden.

Debate over the various aspects of taxation goes back at least to the tax collectors of Biblical Times. In that history, some two hundred years ago Adam Smith, in the closing chapter of his monumental *Wealth of Nations*, gave us four canons of taxation that can still be instructive. While Smith is most noted as the champion of laissez faire, even a casual reading reveals that he assigned to government a substantial role in the economy. To support government, he recognized the need for revenue and proceeded to lay out the principles to be followed in securing that revenue from the people. The four principles according to Adam Smith are:

1. Equitable. Smith states that, "The subjects of every state ought to contribute towards support of the government, as nearly as possible, in proportion to the revenue which they respectively enjoy under the state."
2. Certain. Smith's second canon is, "The tax each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought to be clear and plain to the contributor, and to every other person."
3. Convenient. Smith advocates that, "Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it."
4. Economical. Smith's fourth canon is, "Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the state."

In current discussions of changes in our tax structure, we can apply Smith's canons of taxation to our benefit.

The so-called flat rate tax plan has received considerable attention recently by people both in government and out. Typical of such proposals is that developed by Alvin Robushka and Robert Hall of the Hoover Institution. Their plan would require all taxpayers to pay the same rate, somewhere between 11% and 19%, with almost no tax preference. As proposed, it would exempt savings and is therefore essentially a tax on consumption. Applying Smith's canons of taxation, the simplification of currently complex tax reporting would certainly make the flat rate tax more certain, more convenient, and probably more economical. However, since it eliminates the progressivity of our current tax system, Smith's first canon, the ability to pay principle, would be violated.

A second new tax proposal is an European style value-added tax (VAT). VAT is essentially a national sales tax which, in-

stead of being applied in one shot at the retail level, is added into the price as a percentage of the value added at each stage of production. For example, that tax is added to the price of wheat when it is sold to the miller, to the price of flour as it goes to the baker, and to the price of bread as it goes to the grocer. Most of the tax is hidden in the price of the product and is a tax on consumption. Smith's canons of certainty, convenience and economy would be admirably met, but the VAT would be highly regressive. It could be made less regressive by exempting housing, food, and medical care, but still would fall far short of Smith's first canon.

Other tax proposals include certain excise taxes, or an energy tax on oil, or a surtax. All have some advantages but all fail on the equity criterion.

Adam Smith demonstrated in his discussion that he was very aware that a given tax might not fulfill all four canons equally well but might live up to each of them in different degrees. One goal might be achieved to a smaller degree so that another could be accommodated. The primary concern then is not in devising a tax that perfectly fulfills all canons—that may be immpossible—but in balancing each against the others so that the total benefit is maximized. This ideal balance, of course, ultimately depends on our values, and while Adam Smith and other economists can give us insights, society in the end must make the choices.

AN ECONOMIC FORECAST FOR ARKANSAS THROUGH 1985

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Betty Weeks
MBA Candidate
University of Arkansas, Fayetteville

In July 1984 the Bureau staff conducted a survey of 211 Arkansans through a mailed questionnaire covering many facets of the Arkansas and United States economies at calendar yearends 1984 and 1985. This was a purposive sample of Arkansas academics, businessmen, and public officials all of whom in their daily lives were closely related to either the theoretical or practical aspects of economic performance. Within three weeks, 75 statistically useable returns were received for a 35 percent rate of return which, without follow-up, is acceptable. Exhibit 1 is a facsimile of the cover letter and Exhibit 2, the questionnaire. In Exhibit 2, entered opposite each subitem of items 1 through 13 and 17 is the percentage distribution of responses for that subitem.

For item 16, the three numbers for each subitem indicate the cumulative percentages of those who felt there was less than a 50 percent chance, those who felt there was at least a 50 percent chance, and those who felt there was a 100 percent chance, respectively.

For items 14 and 15, two response percentages are listed for each subitem. The first number indicates the percentage of responses which ranked the subitem first. The second number indicates the cumulative percentage of responses ranked 1 through 5 for each subitem in #14 or 1 through 3 in #15. Note that the percentages may not total 100 because of rounding. Also note that item 5b has been eliminated because the introductory explanation/statement was omitted on half of the questionnaires.

In general the economic outlook reflected by the survey sample was optimistic: the recovery would certainly continue through 1984 (80 percent, item-16) and most likely would continue through 1985 (65 percent-item 16). Meanwhile inflation would hold around 5 percent in 1984 and perhaps move above that level in 1985. Otherwise, the trend for wage rates, consumer loans, investment funds, new construction, retail sales, civilian labor force, transportation costs, population, farm cash receipts, and personal income is expected to rise through 1985. Unemployment meanwhile was expected by most to fall to between 7 and 8 percent for both years. However, a substantial percentage of respondents (14 and 12 respectively) think that unemployment in 1985 might either fall below 7 percent or rise above 9 percent.

The issues of greatest importance in both 1984 and 1985 were the U.S. budget deficit, interest rates, and inflation. Item 14 responses showed that solid majorities felt that the budget deficit was the single most important issue. Interest rates and inflation while seemingly far less important were still sufficiently critical issues to be rated at more than 10 percent. Furthermore, the item 15 response distribution again rates the same three subitems as the principal economic problems. Looking back to 1980 and 1981, inflation, recession, and government deficits were the key

issues with inflation the greatest problem. By 1983, the deficit had become the key issue with unemployment, interest rates, and inflation substantially rated. Meanwhile, the deficit, unemployment, interest rates, and inflation were designated as the problems in the economy.

With respect to item 17, instituting "tax credits to stimulate employment" and letting "the price system regulate the market" have remained the choices over the past five years; however, emphasis has shifted to now favor price system regulation.

The outlook for the Dow Jones Industrial average shows that 87 percent anticipated a level of 1000 or better in 1984 while 61 percent believed the average will be between 1100 and 1200. For 1985, the responses showed more spread toward higher levels. For example, 86 percent expected a level of at least 1000, 22 percent favored a level between 1100 and 1200, another 35 percent anticipated a level between 1200 and 1300; and a solid 10 percent thought the level would exceed the 1300 mark. Back in 1980, simple majorities thought the level would fall between 800 and 900. In 1982, only 25 percent of the sample anticipated that the Dow would top 950. In the 1983 survey, the average had zoomed upward and for 1984 56 percent anticipated the Dow would be between 1000 and 1300 with another 38 percent thinking it would exceed 1300.

EXHIBIT 1

BUREAU OF BUSINESS AND ECONOMIC RESEARCH
(501) 575-4151
Fayetteville, Arkansas 72701

UNIVERSITY OF ARKANSAS · College of Business Administration

July 20, 1984

Dear Sir:

A forecast of the trend of Arkansas economic activity over the next eighteen months is a natural and desirable extension to supplement the "Quarterly Economic Indicators" published in the Arkansas Business and Economic Review which is distributed to more than 2,500 Arkansas subscribers. Accordingly, the Bureau staff has developed a questionnaire to be sent to some two hundred Arkansas residents who are knowledgeable of the State's economy and can provide expert opinions on the economic trend. The survey sample consists of selected representatives from academia, business, and government. Predictions are sought for the yearend positions of calendar years 1984 and 1985.

You are one of those who are requested to express their opinions on Arkansas' ongoing economic activity. You are asked to indicate your views on items in the attached questionnaire and to return it to:

Bureau of Business and Economic Research'
College of Business Administration
University of Arkansas
Fayetteville, Arkansas 72701

In addition to your responses to the specific questions, please feel free to add suggestions on other subject areas that should be included in future economic forecast surveys. Also, note that you are not asked to identify yourself with your responses; but your submission will be accorded confidentiality if you wish to identify yourself in responding.

You are requested to return your completed questionnaire as soon as possible but not later than August 10, 1984, so that the resulting forecast can be included in the Review to be published this Fall. Your participation will be appreciated. An addressed, postage-paid envelope is enclosed for your convenience.

Sincerely,

Phillip Taylor
Director

PT/sn

Enclosure

EXHIBIT 2

ECONOMIC CONDITION SURVEY

Estimated Key Economic Trends in Arkansas as of yearend, Calendar 1984 and 1985

Please indicate the phrase which most nearly corresponds with your views. As a point of reference, unless specified otherwise, all change is to be estimated for the 1984 and 1985 yearend levels (base = yearend 1983).

1. Wage rates in real terms in Arkansas will be:

1984		1985	1984		1985
1	Down	4	54	Up	64
45	About the Same	32	0	No Opinion	0

2. Total consumer loans in Arkansas will be:

1984		1985	1984		1985
1	Down	8	81	Up	63
18	About the Same	29	0	No Opinion	0

3. Capital investment funds expended in Arkansas for plant and equipment will be:

1984		1985	1984		1985
7	Down	6	66	Up	60
27	About the Same	35	0	No Opinion	0

4. Price level for consumers in Arkansas will be:

1984		1985	1984		1985
1	Down more than 1%	0	30	Up 1% to 3%	25
1	Down 1% or less	0	47	Up 3% to 5%	37
7	About the Same	4	4	Up more than 5%	30
10	Up 1% or less	4	0	No Opinion	0

5a. Value in current dollars of new residential construction in Arkansas will be:

1984		1985	1984		1985
8	Below 1982 level	18	62	Above 1982 level	57
30	About the Same	24	0	No Opinion	1

b. Arkansas' residential construction experience, relative to that of the U.S., will be:

1984		1985	1984		1985
	Worse			About the Same	
	Better				

6. Level of commercial-industrial activity in Arkansas as measured by retail sales will be:

1984		1985	1984		1985
1	Down	4	93	Up	65
5	About the Same	30	0	No Opinion	1

7. Unemployment rate in Arkansas (8.6% in April 1984) will be:

1984		1985	1984		1985
3	Less than 7	14	5	Between 9 & 10%	12
46	Between 7 and 8%	40	0	Over 10%	0
44	Between 8 and 9%	34	1	No Opinion	0

8. Civilian labor force (1,065,900 in April 1984) in Arkansas will be:

1984		1985	1984		1985
1	Down	4	49	Up	55
45	About the Same	37	4	No Opinion	4

9. Cost of transportation services in Arkansas will be:

1984		1985	1984		1985
5	Down	1	49	Up	61
35	About the Same	27	11	No Opinion	11

10. In comparison with the U.S. average, Arkansas' total population change will be:

1984		1985
16	Below the U.S. average	16
32	About the same as the rest of the country	27
51	Above the U.S. average	57

11. Total farm cash receipts for 1984 and 1985 in current dollars (current dollar cash receipts from Arkansas farm marketings totaled $3,339.9 million in 1982 and $2,999.4 million in 1983) will:

1984		1985
16	Decrease from the 1983 current dollar level	12
33	Remain about the same as 1983 current dollar amount	26
51	Increase from the 1983 current dollar level	62

12. With respect to the 1983 total of $21,046 million, total annual Personal Income for Arkansans in *real* dollars (current 1984 and 1985 dollars adjusted for inflation to 1983 dollars) will:

1984		1985	1984		1985
1	Fall	5	67	Rise	68
31	Remain about the same	21	1	No Opinion	5

13. The Dow Jones Industrial Average (approximately 1117 on July 16, 1984) will be:

1984		1985	1984		1985
0	Less than 900	1	25	Between 1150 & 1200	12
4	Between 900 & 1000	4	8	Between 1200 & 1250	19
5	Between 1000 & 1050	4	0	Between 1250 & 1300	16
12	Between 1050 & 1100	15	1	Over 1300	10
36	Between 1100 & 1150	10	8	No Opinion	8

14. Please rank in descending order five (5) issues, that you feel will exert the most influence on the U.S. economy (1 = most significant).

1984		1985
11-10	Inflation	14-10
67-19	U.S. budget deficits	62-19
0-2	Weather effects on agriculture and energy usage	0-1
0-0	Ecological and environmental pollution	0-0
1-7	Foreign competition in domestic markets	1-7
0-0	Consumer awareness movements	0-0
0-6	Unemployment	0-6
0-4	Energy supply and cost	0-5
0-3	International exchange rate	0-2
0-9	Balance of trade deficits	0-8
17-18	Interest rates	14-19
0-2	New acts and laws by Congress	1-3
1-8	Money supply	1-8
0-3	International Commitments and developments	0-2
3-8	Outcome of Presidential Election	7-8
0-1	Other	0-1

15. In our society, the three (3) most serious economic problems will be (1 = most serious).

1984		1985
0-6	Foreign competition in domestic market	1-6
1-7	Unemployment	1-6
12-10	Inflation	13-14
6-10	Declining productivity and real growth	4-9
0-10	Balance of trade deficits	0-6
41-30	U.S. budget deficits	60-30
15-27	Interest rates	20-28
1-1	Other	0-0

List: _____

_____

16. What is the percent chance that in the domestic economy the recovery will continue through 1984? 20-80-7 %, through 1985? 35-65-0 ?

17. With the recent U.S. experience as regards inflation and unemployment, what approach is recommended in order to reduce unemployment? (If more than one choice, rank in descending order from 1 = best approach.)

1984		1985
3	Reinstitute the military draft	3
0	Create more government "public service" jobs	0
5	Accelerate public works spending	5
21	Institute tax credit to stimulate employment	20
54	Let the price system regulate the market	55
6	Sponsor job training programs, include OJT	7
0	Broaden entitlement programs	0
5	Eliminate minimum wage legislation on teenagers	5
2	Increase defense spending	2
5	Other	3

List: _____

_____

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

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ARKANSAS ECONOMY: Q-II, 1984 AND PROJECTED Q-III, 1984

Harry French
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The Arkansas economy in Q-II, 1984 was mixed. There were small gains in Total Employment (0.9 percent), Personal Income (0.1 percent), Value Added by Manufacture (0.6 percent); moderate improvement in Total Waterborne Commerce (3.7 percent) and Non-residential Construction (3.4 percent); large increases in Residential Construction (29.4 percent) and Internal Waterborne Commerce (38.0 percent); a moderate decrease (7.1 percent) in Net New Savings; and large decreases in Total New Loans (42.1 percent) and Cash Receipt from Farm Marketings (26.1 percent).

Nationally, the economy continued its recovery and in Q-II showed more balance than the Arkansas economy. More specifically, for the U.S., Employment (1.4 percent), Personal Income (2.1 percent), and Production (2.0 percent) showed positive improvement; Cash Receipts from Farm Marketings showed a moderate increase (5.7 percent); and both Residential (35.0 percent) and Non-residential Construction (25.8 percent) had large increases.

As must be expected the volatility of individual components of the Arkansas economy is much greater than that of the national economy which has greater diversity. Also, the downturn in Savings and Loan activities was really less drastic than it appeared as both new loans and net savings are running ahead of the annual totals for all of the last seven years except 1983.

Estimation of performance in Q-III, 1983 for both economies anticipates improvement in all categories as consumer spending again picks up and provides buoyancy, inflation remains low (1.1 percent rise from Q-I through Q-II), and the prime rate hovers around the 12 percent level.

EMPLOYMENT

Base Year to Date and Quarterly Changes in Total Employment, Arkansas and United States

Seasonally adjusted, percent. Base Year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Arkansas	+ 46.7	− 1.2	+ 2.8	+ 3.2	+ 0.9
United States	+ 41.4	+ 1.7	+ 0.9	+ 1.2	+ 1.4

Employment by Major Industry Group in Arkansas, and Unemployment Rate, Arkansas and United States

Seasonally adjusted, units — Actual Rate, Percent

TIME PERIOD	EMPLOYMENT				UNEMPLOYMENT RATE	
	Wage and Salary		Agricultural	Total	Arkansas	United States
	Manufacturing	Nonmanufacturing				
1977	208,900	483,400	62,800	876,000	6.6	7.1
1978	216,500	507,350	61,250	886,000	6.3	6.1
1979	217,750	526,700	65,800	926,000	6.2	5.8
1980	210,050	540,400	65,100	923,000	7.6	7.1
1981	212,100	536,150	64,100	936,000	9.1	7.6
1982	195,625	525,925	63,440	919,000	9.7	9.5
1983	199,880	531,265	62,395	920,730	9.5	9.7
1984, Q-I	208,610	556,790	62,935	858,135	10.0	8.4
Q-II	209,685	558,940	61,420	966,544	8.8	7.3

PERSONAL INCOME

Base Year to Date and Quarterly Changes in Personal Income, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Arkansas	+ 431.3	+ 2.1	+ 2.4[R]	+ 4.1[R]	+ 0.1
United States	+ 373.8	+ 1.8	+ 2.6	+ 2.9[R]	+ 2.1

Personal Income in Arkansas

Seasonally adjusted, millions of dollars

	1977	1978	1979	1980	1981	1982	1983[R]	1984
Quarter								
Jan-Mar	2,837	3,118	3,724	4,014	4,507	4,786	5,060	5,619[R]
Apr-Jun	2,948	3,208	3,759	4,002	4,606	4,811	5,157	5,626
Jul-Sep	2,984	3,315	3,859	4,169	4,800	4,866	5,264	
Oct-Dec	3,070	3,406	3,963	4,288	4,813	4,968	5,394	
Annual	11,839	13,047	15,305	16,473	18,726	19,431	20,875	

[R] - Revised Based on BEA Computer Report, October 1984.

VALUE ADDED BY MANUFACTURE

Base Year to Date and Quarterly Changes in Manufacturing, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Arkansas	+ 345.8	+ 4.1	− 2.3	+ 10.5	+ 0.6
United States	+ 63.4	+ 5.1	+ 2.4	+ 2.8	+ 2.0

Value Added by Manufacture in Arkansas

Seasonally adjusted, millions of dollars

	1977	1978	1979	1980	1981	1982	1983	1984	Not seasonally adjusted 1984
Quarter									
Jan-Mar	1,158.2	1,392.3	1,557.6	1,660.6	1,687.4	1,500.7	1,525.9	1,736.3	1,622.7
Apr-Jun	1,226.4	1,445.9	1,547.7	1,520.5	1,656.6	1,505.2	1,544.7	1,747.5	1,731.2
Jul-Sep	1,234.1	1,411.2	1,505.9	1,545.0	1,599.5	1,497.0	1,608.5		
Oct-Dec	1,248.6	1,391.3	1,498.2	1,589.6	1,530.9	1,462.1	1,571.3		
Annual	4,867.3	5,640.7	6,109.4	6,315.7	6,474.4	5,965.0	6,250.4		

CASH RECEIPTS FROM FARM MARKETINGS

Base Year to Date and Quarterly Changes in Cash Receipts, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Arkansas	+ 171.9	+ 31.6	+ 0.4	+ 1.1	− 26.1
United States	+ 232.0	+ 3.9[R]	− 10.7[R]	+ 4.5[R]	+ 5.7

Cash Receipts from Farm Marketings in Arkansas

Seasonally adjusted, thousands of dollars

Quarter	1977	1978	1979	1980	1981	1982	1983[R]	1984	Not seasonally adjusted 1984
Jan-Mar	686,105	915,305	931,511	961,705	823,428	868,250	675,728	852,854	721,548
Apr-Jun	703,457	705,441	719,506	658,942	909,757	881,841	638,833	629,973	457,684
Jul-Sep	578,357	760,304	762,307	879,485	1,011,547	800,923	840,884		
Oct-Dec	500,169	584,144	663,304	570,684	692,029	772,552	843,988		
Annual	2,468,088	2,965,194	3,081,628	3,070,816	3,436,761	3,323,566	2,999,433		

[R] - Revised based on "Farm Income," *Economic Indicators* (September 1984), p. 7.

ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

Base Year to Date and Quarterly Changes in Activity of Arkansas S & L Associations

Not seasonally adjusted, percent (based on CONSTANT DOLLARS), Base year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Total New Loans	+ 354.6	− 7.2	− 5.5	+ 16.6	− 42.1
Net New Savings	+ 338.2	− 56.9	+ 37.1	+ 13.8	− 7.1

Economic Activity of Arkansas Savings and Loan Associations

Not seasonally adjusted, Thousands of dollars

TIME PERIOD	TOTAL NEW LOANS		NET NEW SAVINGS	
	Current $	1967 $	Current $	1967 $
1977	815,800	448,590	405,000	223,492
1978	729,300	373,700	416,900	213,610
1979	625,900	290,560	436,830	204,525
1980	504,700	204,275	287,600	115,580
1981	360,800	132,970	20,000	7,240
1982	677,400	233,370	353,800	121,355
1983	2,370,300	793,540	1,446,300	487,430
1984 Q-I	712,300	232,500	277,000	90,410
Q-II	416,900	134,610	260,100	83,985

WATERBORNE COMMERCE:
McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Base Year to Date and Quarterly Changes in Total and Internal Tonnages

Not seasonally adjusted, percent, Base = Ave. Qtr. 1971

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Total	+ 166.3	+ 19.1	− 17.0	+ 25.8	+ 3.7
Internal	+ 10.1	+ 53.7	− 21.1	− 2.9	+ 38.0

Freight Traffic
Arkansas River Commerce

Not seasonally adjusted, Thousands of short tons

TIME PERIOD	TRAFFIC TONNAGES*			
	Inbound	Outbound	Internal	Total
1977	2,841	2,339	3,463	9,138
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981	1,564	5,684	1,741	9,446
1982	1,520	4,611	1,561	8,258
1983	1,918	3,905	1,904	8,017
1984 Q-I	492	1,062	484	2,341
Q-II	595	1,006	667	2,427

*Total tonnage includes "through traffic"—shipments which originate and terminate outside the Arkansas River Commerce Area.

RESIDENTIAL CONSTRUCTION CONTRACTS

Base Year to Date and Quarterly Changes in Residential Construction, Arkansas and United States

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Arkansas	+ 418.3	− 4.3	− 16.1	+ 2.9	+ 29.4
United States	+ 509.0	+ 1.2	− 15.5	− 0.3	+ 35.0

Residential Construction Contracts in Arkansas

Seasonally adjusted, Thousands of dollars

Quarter	1977	1978	1979	1980	1981	1982	1983	1984	Not seasonally adjusted 1984
Jan-Mar	160,861	220,739	205,119	144,050	176,180	115,590	206,450	242,890	215,900
Apr-Jun	173,558	236,915	153,917	137,600	159,750	153,850	240,380	255,210	279,300
Jul-Sep	182,210	227,633	193,364	177,450	138,360	174,250	231,250		
Oct-Dec	217,222	236,718	154,130	185,450	158,510	204,440	228,180		
Annual	733,851	922,005	706,530	664,550	632,800	648,130	906,260		

NONRESIDENTIAL CONSTRUCTION CONTRACTS

Base Year to Date and Quarterly Changes in Residential Construction, Arkansas and United States

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-II	1983 Q-II thru 1983 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II
Arkansas	+ 211.5	− 1.5	+ 34.3	− 9.7	+ 3.4
United States	+ 279.4	+ 3.9	− 4.2	− 4.0	+ 25.8

Nonresidential Construction Contracts in Arkansas

Not seasonally adjusted, Thousands of dollars

Quarter	1977	1978	1979	1980	1981	1982	1983	1984
Jan-Mar	57,486	72,851	88,988	72,300	90,500	96,300	69,500	108,500
Apr-Jun	63,726	60,479	109,976	91,200	72,700	54,700	90,900	112,200
Jul-Sep	67,632	90,471	70,296	91,900	59,400	72,000	89,500	
Oct-Dec	76,866	69,041	112,549	99,700	79,500	56,600	120,200	
Annual	265,710	22,842	381,809	355,100	302,100	279,600	370,100	

LABOR FORCE ESTIMATES
June 1984, not seasonally adjusted

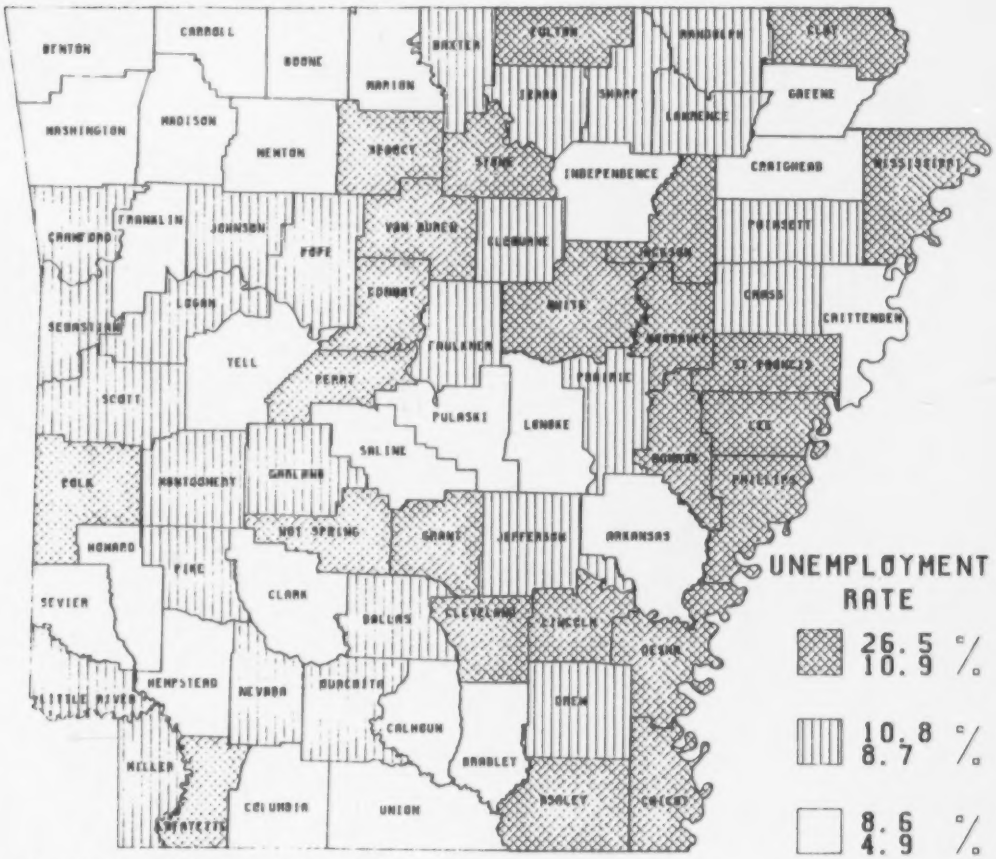
State and SMSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES	115,393,000	7.4	106,812,000
STATE OF ARKANSAS	1,073,200	9.1	975,400
Fayetteville-Springdale SMSA (Benton & Washington Counties)	86,750	5.6	81,850
Fort Smith SMSA (Crawford & Sebastian Counties in Arkansas and LeFlore & Sequoyah Counties in Oklahoma)	95,150	9.7	85,950
Little Rock-North Little Rock SMSA (Pulaski & Saline Counties)	206,500	7.1	191,900
Pine Bluff SMSA (Jefferson County)	39,250	10.1	35,275

County	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	12,050	7.9	11,100	Lee	5,075	16.3	4,250
Ashley	10,700	11.2	9,500	Lincoln	4,350	12.1	3,825
Baxter	11,075	10.6	9,900	Little River	6,050	9.9	5,450
Benton	37,850	5.4	35,800	Logan	7,750	9.0	7,050
Boone	13,900	5.8	13,100	Lonoke	16,675	7.3	15,450
Bradley	5,200	8.2	4,775	Madison	6,725	6.7	6,275
Calhoun	2,775	7.2	2,575	Marion	7,325	6.5	6,850
Carroll	10,700	4.9	10,175	Miller	16,150	8.7	14,750
Chicot	6,800	14.7	5,800	Mississippi	28,125	12.8	24,525
Clark	10,200	7.4	9,450	Monroe	4,850	13.4	4,200
Clay	9,925	13.4	8,600	Montgomery	3,050	9.8	2,750
Cleburne	7,350	9.9	6,625	Nevada	4,150	9.0	3,775
Cleveland	1,875	13.3	1,625	Newton	3,525	8.5	3,225
Columbia	13,875	7.7	12,800	Ouachita	14,325	9.2	13,000
Conway	9,450	26.5	6,950	Perry	3,250	20.0	2,600
Craighead	32,675	7.3	30,275	Phillips	13,025	14.0	11,200
Crawford	17,625	10.8	15,725	Pike	4,225	9.5	3,825
Crittenden	24,375	8.6	22,275	Poinsett	10,800	10.6	9,650
Cross	8,775	10.3	7,875	Polk	6,200	17.3	5,125
Dallas	4,300	9.3	3,900	Pope	19,650	9.4	17,800
Desha	8,275	16.3	6,925	Prairie	4,275	9.9	3,850
Drew	8,300	9.0	7,550	Pulaski	178,700	7.1	166,000
Faulkner	23,075	8.7	21,075	Randolph	7,675	9.8	6,925
Franklin	6,625	8.3	6,075	St. Francis	13,400	15.3	11,350
Fulton	3,025	14.0	2,600	Saline	27,800	6.8	25,900
Garland	31,825	8.9	29,000	Scott	4,000	10.0	3,600
Grant	4,275	12.3	3,750	Searcy	3,225	12.4	2,825
Greene	14,300	8.4	13,100	Sebastian	44,975	9.8	40,550
Hempstead	10,850	7.4	10,050	Sevier	6,675	8.6	6,100
Hot Spring	11,175	12.1	9,825	Sharp	4,875	10.8	4,350
Howard	8,625	5.5	8,150	Stone	4,050	11.1	3,600
Independence	16,225	8.2	14,900	Union	24,725	8.1	22,725
Izard	4,900	9.2	4,450	Van Buren	4,475	12.3	3,925
Jackson	10,000	14.8	8,525	Washington	48,900	5.8	46,050
Jefferson	39,250	10.1	35,275	White	23,725	11.6	20,975
Johnson	9,150	9.8	8,250	Woodruff	4,575	11.5	4,050
Lafayette	3,750	11.3	3,325	Yell	8,375	7.2	7,775
Lawrence	8,400	9.2	7,625				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

LABOR FORCE ESTIMATES
JUNE 1984

IN JUNE, ARKANSAS' CIVILIAN LABOR FORCE FELL BY 8,900 TO TOTAL 1,073,200. TOTAL EMPLOYMENT DECREASED 13,200 TO TOTAL 975,400. UNEMPLOYMENT ROSE 4,300 TO TOTAL 97,800. OF THE 75 COUNTIES, CARROLL HAD THE LOWEST UNEMPLOYMENT RATE AT 4.9 PERCENT AND CONWAY THE HIGHEST AT 26.5 PERCENT. MOREOVER THE UNEMPLOYMENT RATES IN 44 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. FOR THE SMSAS, FAYETTEVILLE - SPRINGDALE HAD THE LOWEST UNEMPLOYMENT RATE AT 5.6 PERCENT AND PINE BLUFF HAD THE HIGHEST RATE AT 10.1 PERCENT. THE RATES FOR THE LITTLE ROCK-NORTH LITTLE ROCK AND THE FORT SMITH SMSAS WERE 7.1 AND 9.7 PERCENT, RESPECTIVELY.

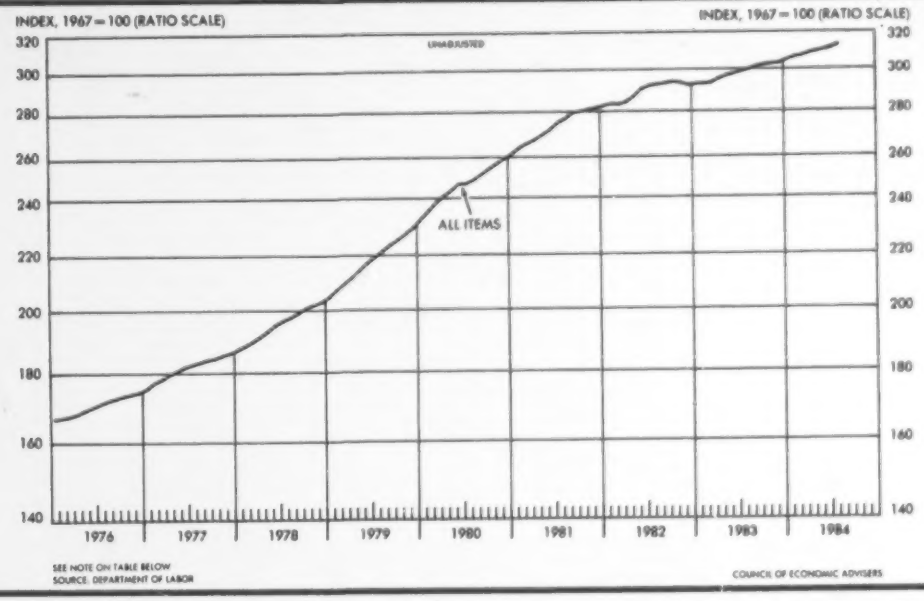


UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

BEST AVAILABLE COPY

CONSUMER PRICES

In August, the consumer price index for all urban consumers rose 0.5 percent seasonally adjusted (0.4 percent not seasonally adjusted). The index was 4.2 percent above its level in August 1983.



SEE NOTE ON TABLE BELOW
SOURCE: DEPARTMENT OF LABOR

COUNCIL OF ECONOMIC ADVISERS

[1967 = 100, except as noted; monthly data seasonally adjusted, except as noted]

Period	All items [1] NSA	Food	Housing: Total [1]	Housing: Shelter: Total	Housing: Shelter: Renters' costs [2]	Housing: Shelter: Homeowners' costs [3] NSA	Housing: Shelter: Maintenance and repairs NSA	Housing: Fuel and other utilities	Apparel and upkeep	Transportation: Total [1]	Transportation: New cars	Transportation: Motor fuel [4]	Medical care	Energy [4]	All items less food, energy, and shelter
Rel. imp. [5]	*100.0*	*18.7*	*37.6*	*21.5*	*7.0*	*14.0*	*0.5*	*8.2*	*5.2*	*21.8*	*3.5*	*5.9*	*6.1*	*11.9*	*47.9*
1976	170.5	180.8	174.6	179.0	.....	.....	199.6	182.7	147.6	165.5	135.7	177.9	184.7	189.3	159.9
1977	181.5	192.2	186.5	191.1	.....	.....	214.7	202.2	154.2	177.2	142.9	188.2	202.4	207.3	169.5
1978	195.4	211.4	202.8	210.4	.....	.....	233.0	216.0	159.6	185.5	153.8	196.3	219.4	220.4	179.1
1979	217.4	234.5	227.6	239.7	.....	.....	256.4	239.3	166.6	212.0	168.0	265.6	239.7	275.9	191.5
1980	246.8	254.6	263.3	281.7	.....	.....	285.7	278.6	178.4	249.7	179.3	369.1	265.9	361.1	208.3
1981	272.4	274.6	293.5	314.7	.....	.....	314.4	319.2	186.9	280.0	190.2	410.9	294.5	410.0	228.1
1982	289.1	285.7	314.7	337.0	.....	.....	334.1	350.8	191.8	291.5	197.6	389.4	328.7	416.1	245.6
1983	298.4	291.7	323.1	344.8	103.0	102.7	346.3	370.3	196.5	298.4	202.6	376.4	357.3	419.3	258.4
1983: Aug	300.3	291.7	324.1	346.3	103.6	103.0	347.9	371.9	197.9	300.8	203.3	383.7	360.3	424.6	259.7
Sept	301.8	292.3	325.3	348.0	104.2	103.5	346.6	372.9	198.2	302.8	204.9	383.7	361.7	425.1	260.9
Oct	302.6	293.5	326.0	349.3	104.6	103.9	351.1	372.2	198.2	304.4	205.5	383.2	362.9	424.2	262.2
Nov	303.1	294.1	327.4	350.7	105.0	104.3	353.4	374.4	198.5	305.5	205.3	381.6	364.7	424.5	263.5
Dec	303.5	295.4	328.1	351.8	105.3	104.5	354.7	373.8	198.5	306.1	205.7	379.8	366.0	423.3	264.2
1984: Jan	305.2	300.2	329.6	353.0	105.7	104.9	356.7	378.2	199.0	306.7	205.6	375.9	368.6	421.7	265.8
Feb	306.6	302.2	331.1	353.8	106.0	105.1	353.5	384.8	198.5	306.6	206.4	370.5	371.5	422.7	266.7
Mar	307.3	301.8	331.2	355.3	106.5	105.6	355.3	380.9	198.6	309.4	207.4	374.0	373.5	421.8	267.8
Apr	308.8	301.7	333.3	357.6	107.4	106.2	356.3	383.9	198.5	311.2,	207.6	375.4	375.3	424.7	269.1
May	309.7	300.9	334.1	358.7	107.8	106.5	357.3	384.6	198.6	312.7	207.2	376.1	377.3	425.4	270.0
June	310.7	301.3	334.9	360.0	108.2	106.8	358.9	385.4	198.1	312.1	207.3	370.4	379.0	422.6	270.7
July	311.7	302.2	336.7	362.5	108.9	107.6	360.3	388.6	199.0	311.1	208.3	364.0	381.1	421.2	271.6
Aug	313.0	304.1	338.7	364.3	109.5	108.1	360.1	391.7	200.8	311.2	209.4	361.2	382.2	421.8	272.7

[1] Includes items not shown separately.
[2] December 1982 = 100.
[3] Includes direct pricing of diesel and gasohol beginning September 1981.
[4] Fuel oil, coal, and bottled gas; gas (piped) and electricity; and motor fuel. Motor oil, coolant, etc. also included through 1982.
[5] Relative importance, December 1983.

NOTE.—NSA indicates data are not seasonally adjusted.
Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.
Data beginning 1983 incorporate a rental equivalence measure for homeownership costs and therefore are not strictly comparable with figures for earlier periods.

Source: Department of Labor, Bureau of Labor Statistics.

ERRATA: Volume 17, Number 2, 1984, Table of Contents, and page 7.

Willard B. Platzer, co-authored the article: "The Use of Computers in Arkansas Universities" with *Ronald C. Kettering*. Professor Platzer is Head, Department of Marketing, Finance and General Business, Pan American University. The name *Willard C. Kettering* is fictitious and was erronously composed by using the first name of one of the two authors plus the middle initial and surname of the other.

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contents

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Economic Education: A Continuing Commentary

Selected Arkansas and U.S. Economic Indicators

Arkansas Business and Economic Review

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3. National business and economic issues of general interest to the people of Arkansas; and
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PLANT LOCATION: A CONFLICT BETWEEN MANUFACTURERS AND COMMUNITY INTEREST GROUPS

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Plant location is a topic which has generated considerable interest for many years. Johan Von Thunen developed his isolated state theory in the early 1800s. It was a simple model with location being a function of transportation costs.[1] Probably the most important work in location theory was made by Alfred Weber in developing his least cost theory during the early 1900s. His theory was more complete for locating manufacturing facilities and dealt with multiple markets. His theory not only included both transportation and labor costs but also the more subjective agglomeration factors. Among other pioneering works in the area of location theory were those done by August Losch, Edgar Hoover, and Walter Isard.[2]

In addition to the theoretical studies of plant location, several empirical studies have been of considerable importance in developing the practical side of plant location. Some of these studies are: Mueller, Wilken and Wood's Michigan study of location; Greenhut and Colberg's location study in Florida; Schriver and Carrier's study of Tennessee; and Chapman and Well's Georgia study.[3]

STUDY GROUPS

All of the empirical studies surveyed in my dissertation on location factors dealt with test groups made up of manufacturing executives.[4] The Michigan study was based on a study of top level executives in Michigan and Ohio and reflected opinions on location decisions. Labor, taxes, and transportation factors were found to be most important.[5] The Florida study of location sectioned the state into northern, central, and southern locations for comparative purposes. Important location factors varied according to each region, but access to markets was generally considered as highly important in all areas. Again, the test group was made up of executives of plants located in Florida.[6]

The Tennessee study was conducted somewhat differently in that personal interviews were used instead of mail questionnaires. Again, the test group was manufacturing executives of plants located in Tennessee.[7] A study in Kentucky also had a slightly different flair in that two types of manufacturing executives in Kentucky were polled: executives of newly located plants in Kentucky, and executives whose plants had been located in Kentucky for a number of years. A study with a slightly different test group was made by Robert Boblett, where he surveyed members of the Society of Industrial Realtors.[8] While this is not a manufacturing group, it is still one which is made up of businessmen. Thus, it may be said that most empirical studies on plant location have dealt with businessmen as the primary test group.

All of the studies surveyed could generally have their findings classified into

one of the following four categories: (1) labor, (2) transportation costs, (3) availability of raw materials, and (4) markets. Labor was clearly found to be the single most important factor in the location studies.[9]

THE PRESENT STUDY GROUP

In the study of location factors in Arkansas, a questionnaire was used to poll manufacturing executives as to which factors they felt were important in a locational analysis and which were advantageous in the state of Arkansas.[10] In addition, another group, community leaders in the state of Arkansas, was also sampled. As far as can be ascertained, a community group outside the manufacturing arena has never been polled before. This leads to the question of what significance is this group in a location analysis? It is the manufacturer who does the locating. But, today with plant location being a costly procedure, executives conduct very careful studies and investigate many areas before making a choice. Companies definitely request information from various states, and even make field trips to see possible location areas in various states. In fact, an entire new development in recent years has been for states to try and influence the choice of companies considering relocation. State industrial development commissions have been developed in forty-two states specifically for that purpose.

So, plant location can also be looked at from a marketing viewpoint with the individual states being the marketer of the state to companies interested in location. Therefore, if a state hopes to sell manufacturers on a particular state, it is important for civic interest groups to be informed as to what is important and advantageous in plant location. A state is not going to get very far if it emphasizes cultural facilities to interested industry, when that industry considers labor as most important. In other words, the seller must be informed if he is planning on marketing his location. Polling a group of community leaders and comparing their opinions with those of manufacturing executives could therefore be quite revealing.

THE PRESENT STUDY

In the present study, two manufacturing test groups were used: presidents of manufacturing firms having located a plant in Arkansas (118 of 306 firms, 39% response rate); and presidents of manufacturing firms not locating a plant in Arkansas, but having considered it (73 of 322 firms, 23% response rate). These response rates are based on two mailings. The second questionnaire mailing was made to test the non-respondents of the first mailing. No significant differences in ranking were found between the respondents of the first mailing and the respondents of the second mailing. This would seem to support the conclusion that the results of the study were representative of the entire population. Generally speaking, the two manufacturing groups were significantly correlated on most rankings of location factors. The third group was a civic interest group in Arkansas made up of Chamber of Commerce presidents and town Mayors (209 of 565, 37% response rate). In comparisons with both manufacturing groups, the civic interest group was not significantly correlated on a number of location factor rankings.

A mail questionnaire was used to collect data on thirteen general location factors, (see Factor Ranking Order in Tables 1 and 2), and eighty-four specific location factors (not shown, but the number of factors ranked is indicated after each general factor category under 'Critical Factor Value' in Tables 1 and 2). Factors were ranked on a location factor average based first on importance in a location analysis, and sec-

TABLE 1
SIGNIFICANCE TESTING USING THE SPEARMAN CRITICAL VALUE TABLE IMPORTANCE FACTORS

Factors	*Factor Ranking Order for Test Groups ML	MN	CL	Critical Factor Value	Coefficients of Rank Correlation: Manufacturers Locating Versus Manufacturers Not Locating	Manufacturers Locating Versus Civic Interest Group	Manufacturers Not Locating Versus Civic Interest Group
General factors				.475 (13 ranks)	.94 R	.72 R	.80 R
Labor	1	1	2	.564 (10 ranks)	.99 R	.54 A	.52 A
Taxes	2	2	6	.714 (7 ranks)	.79 R	.75 R	.65 A
Industrial Site	3	4	4	1.000 (2 ranks)	1.00 R	-- A	-- A
Information sources and special inducements	4	5	3	.900 (5 ranks)	.70 A	.70 A	.30 A
Legislative laws and structure	5	3	7	.714 (7 ranks)	.89 R	.50 A	.30 A
Utilities and resources	6	7	5	.600 (9 ranks)	.97 R	.90 R	.77 R
Transportation facilities	7	8	8	.829 (6 ranks)	.89 R	.77 A	.77 A
Raw material supplier	8	10	10	1.000 (2 ranks)	1.00 R	1.00 R	1.00 R
Community	9	6	1	.441 (15 ranks)	.90 R	.66 R	.69 R
Industrial financing	10	9	9	1.000 (3 ranks)	1.00 R	.50 A	.50 A
Markets	11	12	12	.643 (8 ranks)	.45 A	.90 R	.50 A
Business services	12	11	13	.714 (7 ranks)	.90 R	.63 A	.64 A
Personal preferences	13	13	11	1.000 (3 ranks)	1.00 R	.50 A	.50 A

A = Acceptance of hypothesis.
R = Rejection of hypothesis.
*ML = Manufacturers locating in Arkansas.
MN = Manufacturers not locating in Arkansas.
CI = Civic interest group.
Source: Gary M. Epping, *Some Critical Factors in Site Selection in Arkansas, 1958-77* (Ann Arbor: University Microfilms International, 1980, published on demand), page 572.

ond on advantage in the state of Arkansas. The results of the ranking of advantageous location factors in Arkansas was presented in an earlier article (see "Advantageous Plant Location Factors In Arkansas", *Arkansas Business and Economic Review*, Vol. 14, No. 2, Summer, 1981, pp. 20-28). These rankings are summarized in Table 2 under 'Factor Ranking Order for Test Groups'. A presentation of the ranking of important location factors for manufacturers was also presented in another article (see "Important Factors In Plant Location," *Growth and Change*, Vol. 13, No. 2, April, 1982, pp. 47-51). These rankings are also summarized in Table 1 under 'Factor Ranking Order for Test Groups'. It is therefore not the purpose of this article to present rankings of industrial factors. Rather it is the purpose to discover how civic interest groups compare to manufacturers in ranking location factors. Ideally, the civic interest group would be fully aware of what is most important in a location analysis and what is advantageous in the state. In order to test this assumption, the following hypothesis was formulated: there is no significant correlation between rankings of location factors by a civic interest group and by manufacturing groups.

Important Factors in a Location Analysis

The first way of comparing test groups is based on factor rankings indicating importance in a location analysis. One way of doing this is to see if the three test groups were significantly correlated for the ranking of the thirteen general importance factors (see 'General Factors' in Table 1). All three groups were significantly correlated, thus favoring rejection of our hypothesis at the general factor level. A pattern was established here that held for all the other comparisons in this section. The civic interest group, for factors ranked high by manufacturing groups, had factor averages below the manufacturing groups averages. Also, the civic interest group, for factors ranked low by the manufacturing groups, had factor averages higher than the manufacturing averages. In other words, the civic interest group was more conservative (in marking extremes) in their opinion concerning important factors in a location analysis.

After the factors were compared by general factor categories, they were ranked and compared by specific factors within each of the general factor categories. Table 1 summarizes the finding of these comparisons by each general factor category (from Labor to Business Services). The critical value and number of specific factors ranked is shown. An A stands for acceptance of our hypothesis and R stands for rejection of it. The significance level was set at .05. First, it can be seen that there is a significant correlation for *most* factor categories in the comparison of the two manufacturing groups. Only two categories resulted in no significant correlation (Information sources and special inducements, and markets). Here the coefficient of rank correlation was below the critical value.

When the civic interest group is compared to either manufacturing group, it is a different story. Eight of the fifteen comparisons between the civic interest group and the manufacturers-locating-in-Arkansas group results in acceptance of our hypothesis. Also, for the comparison between the civic interest group and the manufacturers-not-locating-in-Arkansas group, ten of the fifteen categories resulted in acceptance of our hypothesis. This gives rather strong support that there is a major difference in what manufacturers feel is important in a location analysis, and what the civic interest group thinks is important. This could present a major problem when the civic interest group tries to sell interested companies on how important the community factor is (ranked #1 by the

civic interest group), when labor has been shown to be the most important consideration (#1 factor) of the manufacturers. Taxes (#2 for the manufacturing groups) could easily be de-emphasized by the civic interest group since they only listed it sixth in their ranking of general factors.

The marketing concept states that the seller must find out what the consumer needs, and try to fulfill that need with its product or service selections. The same is true in plant location. The above results tend to indicate that the civic interest group does not know the overall needs (factors of importance to manufacturers) of the buyer. It therefore follows that the state could lose potential new industry due to this situation, even when there are significant advantages in the state. The state agencies and the civic interest group must cater first to what is important to manufacturers, in order to get companies interested in the state. Arkansas civic interest groups seem to have a knowledge gap here. It is felt that this problem may likely extend beyond Arkansas, since an earlier pilot study in Illinois showed similar results. It is entirely possible that a similar problem exists in a great number of states in both the North and the South.

Advantages in the State of Arkansas

The next section of this paper concerns the same test groups with rankings of location factors based on advantages in the state of Arkansas. In other words, this series of rankings show the benefits of locating in Arkansas. Again, we can use the previously formulated hypothesis that there is no significant difference between the civic interest group and the manufacturing groups. The coefficient of correlations for comparing the three groups for the general factors (see 'General Factors' in Table 2) indicate a significant correlation for all groups. A pattern in factor averages again should be explained, since it was present in all comparisons in this section. The civic interest group factor average was nearly always higher than either factor average for the manufacturing groups. This seems to indicate a strong bias concerning the advantage in Arkansas by the civic interest group. This pattern would indicate that the civic interest group felt most factors were more beneficial in the state of Arkansas than did either of the manufacturing groups.

Each general factor again was broken down into specific location factors within the general factor category. The results of the coefficient of rank correlation test comparisons for all 13 factor categories are shown in Table 2. It can be seen that only two categories (legislative laws and structure, and transportation facilities) show no significant correlation between the two manufacturing groups. When the civic interest group is compared to the manufacturers-locating-in-Arkansas group, six categories show no significant correlation, and indicate acceptance of our hypothesis. In the comparison of the civic interest group and the manufacturers-not-locating-in-Arkansas group, eight of the categories result in no significant correlation.

Again, this gives evidence of a conflict between the manufacturing groups and the civic interest group on what factors are advantageous in the state of Arkansas. Since the manufacturers-locating-in-Arkansas group has already located in Arkansas, it would seem that this group would be very aware of what factors are advantageous in the state of Arkansas. The manufacturers-not-locating-in-Arkansas group agrees for the most part with this group. This would seem to again indicate that the civic interest group is not fully aware of what advantages the state of Arkansas truly has to offer.

From Table 2, the civic interest group again rates the community factor as a major advantage in Arkansas (ranked #2), but both manufacturing groups rank it sixth. At the same time, the civic interest

group ranks labor first, the same as the two manufacturing groups. The industrial site factor was considered of lesser advantage (#4) by the civic interest group than either manufacturing group (ranked #2).

It is hard to sell a state if you don't know what the locational advantages truly are. The above results seem to indicate that the civic interest group is deficient in this area. Just as a car salesman needs to know the important features of his car, so do the community leaders need to know the advantages of the state in order to attract new industry. Again, similar results were found in the pilot study in Illinois, thus presenting the possibility that the problem extends beyond the state of Arkansas. This can be one of the most important aspects in plant location. Once the manufacturer has decided what he feels is important in a plant location analysis, the state must try and sell him according to those factors which are of greatest advantage in the state.

CONCLUSIONS

Manufacturing groups and the civic interest group in Arkansas were not significantly correlated on many categories concerning rankings of location factors on both importance in a location analysis and also advantageous in the state of Arkansas. This is a major finding, and suggests a lack of knowledge by the civic interest group.

In an earlier pilot study of west central Illinois in 1975, a similar conflict was found between Chamber of Commerce presidents and branch plant managers concerning what is advantageous in the state of Illinois. This evidence that Arkansas is not the only state where such a conflict exists points to a need to run a similar type of analysis in other northern and southern states to see if the conflict is wide-spread.

The implications of this conflict are of major importance. New industry means economic development, which carries a significant impact for states in both the South and the North. Some southern states have developed very sophisticated processes of attracting new industry. Information packets, site visits, and help from both state and local agencies are among some of the techniques used in many states. The red carpet treatment is common in several southeastern states and must be given at least partial credit for some of the movement to the South in the last fifteen years.

Northern states have also begun to become more aggressive in presenting their states to new industry. States like New York have lost considerable industry in the past, and there are attempts now being made to retain present industry and to attract new companies. As mentioned earlier, most states have formed some type of industrial development agency for this purpose.

All the same, a state's being interested in new industry and its forming of development agencies are not necessarily enough to secure the industry. The community interest groups must be aware of what is important to manufacturers in regard to plant location, and what is advantageous concerning their own state. The evidence presented above in Arkansas, and the earlier pilot study in Illinois, indicates that this may not fully be the case.

It is therefore recommended that states interested in future economic growth first take a look at themselves in order to determine the advantages of their particular state and what factors are important to various types of manufacturing groups. The state industrial development agency or similar agency would be the logical place to start such a process. Location studies of individual states (such as the one performed in Arkansas) are not that difficult or costly, and can present a wealth of information to state leaders. Such information could then be made available to

both state and local agencies who deal with companies considering the location of a new plant in the state. Information could be mailed to town mayors and Chamber of Commerce presidents, or be presented in the form of a location seminar. Town mayors and Chamber of Commerce presidents must be made aware that their role in selling the State of Arkansas to new industry is of vital importance. It is a role that should be based on more than hearsay information.

This type of effort can do nothing but help eliminate the knowledge gap between manufacturers and civic interest groups. Better informed community leaders increase the likelihood of attracting new industry. The prepared salesman always makes more sales, and in this age of competition concerning plant location, that little extra effort may make the difference in whether a manufacturer chooses your state or another.

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[1]C.M. Wartenburg, trans., and Peter Hall, ed., *Von Thunen's Isolated State* (Oxford: Pergamon Press, 1966), p. 37.

[2]E. Willard Miller, *A Geography of Industrial Location* (Dubuque, Iowa: William Brown Publishers, 1970), p. 3.

[3]Gary M. Epping, *Some Critical Factors in Plant Site Selection in Arkansas, 1958-77* (Ann Arbor, Michigan: University Microfilms International, 1980, published on demand), pp. 1-50.

[4]Ibid., p. 76-77.

[5]Eva Mueller, Arnold Wilken, and Margaret Wood, *Location Decisions and Industrial Mobility in Michigan, 1961* (Ann Arbor: University of Michigan Press, 1961), p. 1-115.

[6]Melvin Greenhut and Marshall Colberg, *Factors in the Location of Florida Industry* (Tallahassee: Florida State University, 1962), pp. 58-81.

[7]William R. Schriver and Ronald Carrier, *An Explanation of Plant Location in Tennessee, 1955-1965* (Memphis State University: Bureau of Business and Economic Research, 1966), pp. 62-64.

[8]Robert P. Boblett, "Factors in Industrial Location," *The Appraisal Journal*, October 1967, pp. 518-526.

[9]Robert G. Turner, *The Locational Characteristics of Kentucky and the Role of the Kentucky Department of Commerce in the Location of New Manufacturing Plants* (Ann Arbor, Michigan: University Microfilms International, 1969).

[10]Epping, *Some Critical Factors in Plant Site Selection in Arkansas, 1958-77*, pp. 75-80.

INVESTING IN ELECTRIC UTILITY STOCK

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INTRODUCTION

Market folklore praises public utility stock as an investment for widows and orphans and testifies against it for the more aggressive investor! However, this brash generalization is no longer true and may, in fact, be quite the contrary. Public utility common stock offers certain investment advantages and has some risks not present for non-regulated companies. An investor may no longer assume that electric utility stock represents a completely safe investment.

Why might an investor choose to invest in a stock with an unassuming name that ends in Power & Light Company when there are many more glamorous sounding investments? The answer is that utilities offer high current payout, tax free accumulation of wealth, a chance to buy stock with no brokerage fees (and often at a discount), and *if* the companies are watched carefully this is available at low risk.

The disadvantages or more appropriately the things to watch out for when investing in utility stock are the company's commitment to nuclear power and the regulatory environment under which the utility operates. Nuclear power from a safety point of view may not be as hazardous as the anti-nuclear forces suggest, but there are tremendous problems facing companies with nuclear power or planned nuclear power. In addition, utilities rely on public utility commissions and state laws to determine the price they may charge for service. These laws and the commission interpretations of them have considerable variability from state to state. An investor must be aware of the potential problems or opportunities that a state's regulatory environment may present. In the long run, the regulatory environment will be one of the major determining factors for the firm's value.

Finally, each utility is limited by law to supply service in a specifically defined service area. That area's economic health can have a tremendous impact on the utility's financial well-being. An investor must be aware of this when deciding upon a utility for an investment.

This paper will explore these issues from an investor's perspective. It will supply an approach which can be used to evaluate a utility's stock as an investment. It will not make specific recommendations, that will be left to the reader.

AUTOMATIC DIVIDEND REINVESTMENT PLANS

One particular feature of public utility common stock is the presence of automatic dividend reinvestment plans (ADRIPs). Under an ADRIP the stockholder may elect to have cash dividends paid in the form of new shares of stocks. Most public utilities have ADRIPs, and there are several advantages to investing through ADRIPs.

Pursuant to the Economic Recovery Tax Act of 1981, reinvested dividends in stock purchases through a qualified electric utility ADRIP are tax free until the stock is sold. This allows the investor to postpone tax payments on the dividends indefinitely. This special feature increases the attractiveness of utility stocks, particularly for investors in high tax brackets.

There are other advantages as well. Several of these plans give 5% discounts on shares purchased with reinvested divi-

dends through these plans. The investor pays only 95% of the cost of the stock. In addition, the company pays all administration and transaction costs; and, since the shares are newly issued, there is no brokerage commission. Some companies will even buy back the stock from the investor at a later time, but this provision is somewhat more rare.

Most ADRIPs have provisions for additional share purchases. A shareholder may, if enrolled in a plan, send a check either monthly or quarterly to purchase additional shares. These additional shares are not generally eligible for the aforementioned 5% discount, but there is generally no brokerage commission. The effective cost of the stock has therefore been reduced because brokerage fees can be quite large on normal stock transactions.

The ADRIPs make utility investments more attractive, and the special tax treatment makes it even more attractive for investors in high tax brackets. If you combine this with the fact that the dividend yield on many utilities is currently in excess of 9%, utility stocks may be a worthwhile investment.

NUCLEAR POWER

An investor must be aware of several things affecting risk when considering public utility common stock. Perhaps the foremost, or at least most publicized, risk is a utility's use of nuclear power.

General Public Utilities (GPU), owner of the Three Mile Island nuclear power plant, is a case in point. The GPU stock price is less than half that of the pre-accident level, and GPU suspended its dividend payments after the accident. Clearly, the owners of GPU stock have been stung by the accident.

While the probabilities of another, similar accident are small, the possibility does exist. The solution from an investor's viewpoint is to look more favorably upon utilities with limited or no nuclear capacity. Or, there are several utilities which coown a power plant. This spreads the risks of another Three Mile Island accident across several companies. A third possibility, which is recommended in any case, is to invest in several companies. Do not put all of your eggs in one basket, particularly when that one basket has nuclear generation capacity.

A related problem concerns those utilities with nuclear power plants under construction. Even before the Three Mile Island accident, the licensing of a new power plant was difficult. Since that accident, it has become virtually impossible. If the investment can't be licensed and does not enter the utility's rate base, one wonders if the billions of dollars invested will be wasted.

The Zimmer nuclear power plant—coowned by the Cincinnati Gas and Electric, the Dayton Power and Light and the Columbus and Southern Ohio Electric Company a subsidiary of American Electric Power—is a good example. The Zimmer plant was originally scheduled for operation in the mid to late 1970s, but the completion date was still not known in October 1983.

A large portion of the problem results from the negative press that nuclear power has received. Even if you personally do not oppose nuclear power, the popular press and anti-nuclear forces have increased the risks of investing in companies with nuclear plants under construction.

REGULATORY ENVIRONMENT

Each state has its own laws which govern utility companies. These laws are often very diverse but may still have a tremendous impact on the value of the utility.

The concept of utility regulation and the many variables of regulation are very complex. For example, things like rate base valuation, fuel adjustment clauses, construction work in process, the historical vs. proforma test years are just some of the

many things an investor would have to be familiar with to make intelligent investment decisions. Combine this with the variability of laws among the 50 states, and it is easy to see why regulation remains a mystery to the average investor.

Fortunately, many of the investment houses or security analyst firms have employees who continually monitor these laws and can grasp their implications. Quite often such services provide a ranking of a state's regulatory environment. The investor may use these services without having to understand all of the features about a state's regulatory laws.

Davidson and Chandy (1983) studied the regulatory environment. To do so, they combined the regulatory ranking systems of five of these investor services into a composite ranking system.

The rankings of the various states have been included in Table 1. To interpret the table, one must only understand that a state rated *3.0* is considered to be very favorably disposed towards utilities while a state rated *1.0* is just the opposite.

Certainly, investments in the states that are more favorably disposed toward the utilities makes sense. However, most other investors will also recognize this; hence, the dividend yields will generally be somewhat lower for the companies in the highly ranked states.

One thing to remember is that the regulatory laws change from time to time. The information in Table 1, for example, does not reflect the changes in the Texas laws that took place in 1983. All of the data is not in yet, but the Texas regulatory environment will not be rated as highly after all of the changes are in effect.

SERVICE AREA ECONOMICS

Public utilities are confined to a specific service area. This has both its good and bad points.

TABLE 1
THE AVERAGE RANK OF STATE REGULATORY ENVIRONMENT

State	Rank	State	Rank
Alabama	1.0	Montana	1.0
Arizona	2.2	Nebraska	1.8
Arkansas	2.0	Nevada	2.0
California	2.2	New Hampshire	2.4
Colorado	2.0	New Jersey	2.0
Connecticut	1.8	New Mexico	3.0
Delaware	2.4	New York	2.4
Florida	3.0	North Carolina	3.0
Georgia	1.6	North Dakota	1.2
Hawaii	3.0	Ohio	2.2
Idaho	2.2	Oklahoma	1.8
Illinois	2.2	Oregon	2.2
Indiana	3.0	Pennsylvania	1.4
Iowa	1.4	Rhode Island	1.4
Kansas	2.0	South Dakota	1.0
Kentucky	2.8	Tennessee	1.2
Louisiana	1.6	Texas	3.0
Maine	1.0	Utah	3.0
Maryland	2.0	Vermont	2.4
Massachussetts	1.8	Virginia	1.8
Michigan	1.4	Washington	2.0
Mississippi	1.4	West Virginia	1.2
Missouri	1.0	Wisconsin	3.0

On the positive side, the utility investor need not worry about competition hurting his company. On the other side, though, the utility is stuck in one area with essentially one product. If the local economy in the utility's service area is depressed, then the utility's earnings will suffer. This is particularly true for utilities that have substantial industrial customers. The recent recession hurt not only the Detroit car manufacturers but also Detroit Edison.

The point to this discussion is to warn that the investor should examine the economy of the utility's service area. In addition, the investor should make sure that industrial sales are not an extraordinarily large part of the business; recessions hurt these utilities most of all.

ADDITIONAL COMMENTS AND CONCLUSIONS

There are other indicators an investor may use to judge a utility. First of all, examine the company's payout ratio. The payout ratio is the company's percent of earnings that are paid out as a cash dividend. Some utilities already payout in excess of 90% of their earnings. Since dividends are the primary source of earnings for a utility investor, a company that is already paying out 90% of its earnings will not be able to increase its dividend very much in the future. Find a utility with a relatively lower payout.

Another way to monitor a utility is to look at its bond rating. While the bond rating deals primarily with the riskiness of the debt issue, the rating agencies consider the company's overall financial health as part of its determination. Evaluating the bond rating is a good guide for the less sophisticated investor. A utility whose bonds are rated AA or A will probably be a more sound investment than one with a lower rating. Once again, you pay for this reduced risk by getting a slightly lower yield. But for the more careful investors, it is probably worth it.

Finally, the items which make a utility investment attractive are:

1. Utilities with ADRIPs that qualify for special tax treatment and/or offer a 5% discount on shares purchased with reinvestment dividends.
2. Utilities that have no planned or current nuclear capacity. At the very least, if your investments include companies with nuclear capacity, try to invest in those that share the nuclear plant with other utilities. A major loss (from an accident or the failure to obtain a license) would then be spread around.
3. Utilities in the higher rated rather than the lower rated states. Your investment yield may be reduced but the long term growth of the utility will be enhanced and the risk will be reduced.
4. Utilities with favorable service areas.
5. Utilities with low payout ratio.
6. Utilities whose bonds are rated AA or A. These will be safer investments.

UNION ORGANIZING ACTIVITY AMONG SOUTHERN DEPOSITORY INTERMEDIARIES

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INTRODUCTION

Historically, the depository institutions sector has not been fertile ground for union organizing activities. For example, Freeman and Medoff report that only 8 percent of all bank employees were covered by labor agreements in 1972 and only 2 percent belonged to unions in 1975.[1] The traditional resistance of white collar workers to union membership, the high turnover among tellers and clerical staff, the composition of the work force with many young workers, women, and part-time employees, the adeptness of managers in developing a supervisory focus in job titles and descriptions, and the pleasant physical surroundings in most depository institutions have contributed to this lack of union success.[2] Recently, however, several national unions have targeted depository intermediaries for organizational efforts.[3]

Over the last decade or so, many economic and social factors converged to increase the attractiveness of depository institutions to organized labor. First, employment in this sector has grown rapidly, e.g., there are now over 1.2 million nonsupervisory employees in commercial banking alone.[4] Second, forecasts indicate that future employment growth is likely to be greatest in the clerical areas of the service sectors. Third, employment in traditional unionized industries (auto, steel, etc.) is declining in both relative and absolute terms. Fourth, the technological revolution in the financial services industry could foster job insecurity and a more strained working environment. Along these lines, vertical communications may be severely limited within the complex hierarchical structure of congeneric corporations and large branching networks. Thus, the rapid development of these organizational forms has the potential for making personnel relations highly impersonal. Under these circumstances, employees may perceive unions as offering a collective voice mechanism or as a countervailing force. Fifth and last, the feminist movement of the 1970s has altered the traditional resistance of female employees to collective action.[5]

Recent studies of union growth suggest that both union activity and success are on the rise in the South.[6] For instance, in commenting on the so called "southern effect", i.e., the hypothesized negative impact of the southern regional variable on union growth, Fiorito and Greer say that the conventional wisdom about southerners' attitudes toward unions may be outdated.[7] The growth of union activity in the South coupled with the focus of several national unions on the financial services sector may portend increased organizing efforts among southern depository intermediaries. This paper reviews union election activity in the southern depository institutions sector over the period 1962-1980. While an examination of this data has value in purely historical terms, the paper also tries to discern any union strategy that may be developing in this sector.

GEOGRAPHICAL PATTERN OF REPRESENTATION ELECTIONS

Twenty-six representation elections occurred in depository institutions in the South during the period 1962-1980. The largest number of elections took place in Louisiana and Tennessee. These states alone accounted for 50 percent of all such elections over the period. Five states—Arkansas, Mississippi, North Carolina, South Carolina, and Virginia—reported no elections at all. Over the period, no individual state averaged even one election per year. Nevertheless, these figures may actually underestimate the extent of union efforts. For example, one authority on labor relations in the South suggests that the number of representation elections is only a lower bound estimate of union activity because only a small fraction of organizing efforts result in actual voting.[8]

Unions had most of their successes in Alabama, Louisiana, and Texas. Of the seven southern states where elections were held, Georgia was the only one in which unions failed to win an election. The percentage of union victories varied from 33 percent in Tennessee to 100 percent in Alabama. On the average, unions won approximately 54 percent of the representation elections among southern depository institutions. Moreover, while a lack of data precludes a complete comparison, it appears that this percentage success is greater than that reported for the industrial sector. For example, over the period 1977-1979, unions won 43 percent of the representation elections among all industries in the South.[9] The comparable figure for the entire U.S. was 46 percent. In contrast, for this three year period, unions were victorious in 66 percent of the elections in the southern depository institutions sector.

Representation elections occurred in all three classifications of depository institutions in Florida and Louisiana. Also, elections were held in credit unions in all seven states. Furthermore, in three states—Georgia, Kentucky, and Texas—elections occurred only among credit unions. These elections involved large credit unions in the metropolitan areas of Atlanta, Louisville, Dallas, and San Antonio. Commercial banks faced union elections in Alabama, Florida, Louisiana, and Tennessee. Unions were initially successful in organizing five of the seven banks where representation elections were held. Subsequently, however, one of the unions was decertified. Mention should be made that two of the unionized banks were located in the same small community (Springhill, Louisiana). Organizing efforts among saving and loan associations have generally been low, but elections did occur in Florida and Louisiana. Unions were successful in Louisiana but not in Florida.

TIME PATTERN OF REPRESENTATION ELECTIONS

Table 1 reports representation elections and union victories by year. Only three elections were conducted in the years from 1962 to 1970. All resulted in union losses. However, from 1971 to 1980, more than two elections per year occurred with unions winning 61 percent of them. The most obvious question at this point is whether this pattern represents a significant trend in union activity? The answer appears to be *no*. While there were more elections and victories in the 1970s, they were not significantly related to time.[10]

Inter-sectoral comparison among the various institutions produced some interesting findings. For example, in the southern depository institutions sector, credit unions accounted for 54 percent of the elections during 1962-1980 period. This percentage seems to be substantially above that for the entire U.S.: Miller reports that between 1976-1979, elections at credit unions represented 46 percent of the total for all depository institutions.[11] For the same period in the South, the figure was

TABLE 2
SIGNIFICANCE TESTING USING THE SPEARMAN CRITICAL VALUE TABLE ADVANTAGE FACTORS

Factors	*Factor Ranking Order for Test Groups ML	MN	CL	Critical Factor Value	Coefficients of Rank Correlation: Manufacturers Locating Versus Manufacturers Not Locating	Manufacturers Locating Versus Civic Interest Group	Manufacturers Not Locating Versus Civic Interest Group
General factors				.475 (13 ranks)	.91 R	.82 R	.79 R
Labor	1	4	1	.564 (10 ranks)	.94 R	.70 R	.61 R
Industrial site	2	2	4	1.000 (2 ranks)	1.00 R	-- A	-- A
Information sources and special inducements	3	1	3	.900 (5 ranks)	.90 R	.80 A	.90 R
Legislative laws and structure	4	5	7	.714 (7 ranks)	.61 A	.64 A	.32 A
Taxes	5	3	5	.714 (7 ranks)	.86 R	.22 A	.06 A
Community	6	6	2	.441 (15 ranks)	.94 R	.63 R	.62 R
Utilities and resources	7	7	6	.600 (9 ranks)	.89 R	.97 A	.90 R
Industrial finance	8	8	11	1.000 (3 ranks)	1.00 R	.50 A	.50 A
Transportation facilities	9	9	10	.829 (6 ranks)	.77 A	.94 A	.89 A
Raw material suppliers	10	13	9	1.000 (2 ranks)	1.00 R	1.00 R	1.00 R
Markets	11	11	12	.643 (8 ranks)	.82 R	.74 R	.64 R
Personal preferences	12	10	8	1.000 (3 ranks)	1.00 R	.50 A	.50 A
Business services	13	12	13	.714 (7 ranks)	.86 R	.75 R	.61 A

A = Acceptance of hypothesis.
R = Rejection of hypothesis.
*ML = Manufacturers locating in Arkansas.
MN = Manufacturers not locating in Arkansas.
CI = Civic interest group.
Source: Gary M. Epping, *Some Critical Factors in Site Selection in Arkansas, 1958-77* (Ann Arbor: University Microfilms International, 1980, published on demand), page 573.

70 percent. Union victories as a percentage of total elections among southern credit unions were also higher; 57 percent as compared to 55 percent for the U.S.

Representation elections at banks and S & Ls accounted for 46 percent of the elections held by southern depository institutions. Comparing our results to Miller's for the years 1976-1979 shows that elections among southern banks and associations represented a much smaller percentage of total sector elections than for the entire nation (30 percent as compared to 53 percent). However, union victories as a percentage of total elections for southern banks and S & Ls were the same as those for the nation. Between 1976-1979, unions won 30 percent of the representation elections among all U.S. banks and S & Ls. Taking the 1962-1980 period as a whole, unions were victorious in 50 percent of the elections conducted among southern banks and associations.

REPRESENTATION ELECTIONS CLASSIFIED BY UNION

A review of the information in Table 2 reveals that several national unions have engaged in representation elections in the southern depository institutions sector. Office and Professional Employees International Union (OPEIU) has been the most active. It was involved in 35 percent of all elections and accounted for 43 percent of all union victories over the period 1962-1980.[12] Three additional national unions—the Teamsters, the Communications Workers, and the Operating Engineers—were responsible for a combined total of 32 percent of all elections. Of this group only the Communications Workers won a majority of their elections.

Only two unions, OPEIU and Operating Engineers, engaged in organizing activities among all three classifications of depository institutions during the 1962-1980 period. OPEIU was involved in six representation elections at commercial banks and won four of them. The only election held by OPEIU at an S & L was unsuccessful. To put these figures in perspective, we might once again compare our findings to those of Miller for the aggregate depository institutions sector. Be-

TABLE 2
REPRESENTATION ELECTIONS CLASSIFIED BY UNION IN THE SOUTHERN DEPOSITORY INSTITUTIONS SECTOR, 1962-1980

			Depository Institution		
Union	Elections	Percent Won	Commercial Banks	Savings and Loan Associations	Credit Unions
Retail Clerks	2	50.0%			✓
Laborers	1	100.0	✓		
Printing Pressman	1	0.0	✓		
Paperworkers	1	100.0			✓
Office Employees	9	66.7	✓	✓	✓
Teamsters	3	0.0			✓
CWA	3	66.7			✓
Operating Engineers	3	33.3	✓	✓	✓
IBEW	1	0.0	✓		
Machinists	1	100.0			✓
UAW	1	100.0			✓
TOTAL	26	53.8%			

Source: NLRB election results, 1962-1980.

tween 1976 and 1979, OPEIU conducted 21 percent of all elections and accounted for 19 percent of all victories among U.S. banks and S & Ls. In contrast, OPEIU was involved in all of the representation elections among southern banks and associations after 1975. Even so, the numbers are so small that it is difficult to say whether these results have anything to do with OPEIU's professed strategy of targeting banks. In any event, the union was successful in only one election. The Operating Engineers entry into the southern depository institutions sector occurred in the early years of the period. This group arranged formal elections at a commercial bank and an S & L. It failed in the former case, but was successful in the latter. In general, the other major unions (Teamsters, IBEW, etc.) have been much less active (i.e., in terms of NLRB-supervised representation elections) among southern banks and S & Ls than on a national basis.

Seventy-two percent of the labor organizations listed in Table 3 were involved in representation elections at credit unions. The unions won 57 percent of those elections as compared to 50 percent for banks and S & Ls. In most cases, union success was among credit unions which had common bonds with organizations already unionized.

ELECTION RESULTS CLASSIFIED BY UNIT SIZE

Table 3 shows representation election results classified by unit size of the southern depository institutions. In the smallest size category, unions won one out of three representation elections conducted at commercial banks. For this group, the victory occurred at a unit which was somewhat larger than the average size for this category. Unions had only one victory in the very smallest election units among the nonbank depository intermediaries. This win came at an S & L. Combining the bank and nonbank elections reveals that unions won 28 percent of the elections in the first size category. In the second group, the ratio of victories to total elections was 83 percent.[13] Unions won all their elections among credit unions and two out of three at commercial banks. In the 21-50 employee class, unions won 55 percent of the representation elections. The two victories at commercial banks occurred in units which were substantially larger than the average size for this class. The win ratio in the final category was 33 percent. Superficially, one might infer from these election results that union victories increase somewhat with the size of the participating unit. However, closer inspection shows that this is not the case. An analysis of variance based on the four group classification in Table 3 yielded a low F-statistic. Thus, the analyst is forced to accept the null hypothesis that no significant difference exists in voting behavior across the varying election unit sizes.

CONCLUSIONS AND PROSPECTS FOR FUTURE ORGANIZING ACTIVITY

Several recent articles warn the managers of banks and other depository intermediaries of an impeding wave of union organizing activity. This article puts these admonishments in perspective by reviewing NLRB election results with the aim of divulging any union strategy which may be emerging. The focus is on the southern depository institutions sector over the period 1962-1980. An examination of the data classified by geographical area, time period, type of institution, representative union, and unit size reveals several important conclusions.

First, there's no apparent geographical pattern to union elections among banks and S & Ls. In contrast, representation elections occurred at credit unions in seven southern states. Moreover, unions were successful in organizing credit unions in some of the South's largest met-

ropolitan areas. The fact that unions won a greater percentage of elections in the South than elsewhere was due primarily to their success among credit unions. Second, the average number of elections in the southern depository institutions sector increased over the last decade. However, the absolute numbers are still small and appear totally unrelated to time even among credit unions. Third, the OPEIU was the most active labor organization among southern depository intermediaries and accounted for all of the elections conducted at commercial banks since 1975. Furthermore, unlike some of the other unions, OPEIU was much more active among southern banks than credit unions. Whether this represents an overt strategy is not ascertainable from the authors' data but, if it is, the election results are not encouraging for its imminent success. Finally, under close scrutiny, it appears that unions were no more successful at organizing small units than large ones. As to prospects, while union gains in the southern depository institutions sector are modest by any measure, their victories at credit unions in large metropolitan areas should not go unnoticed, although it is true that these intermediaries have close ties with their unionized sponsors. Still, recent legislation interfaces banks and credit unions more closely and unions may benefit from this functional convergence.

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[1]Richard B. Freeman and James L. Medoff, "New Estimates of Private Sector Unionism In The United States," *Industrial and Labor Relations Review*, Vol. 32, No. 2, January 1979, pp. 152-160.

[2]Edmond J. Seifried, "The Record of Bank Unionization," *Journal of Retail Banking*, June 1981, p. 26.

[3]These developments are well-documented in the banking literature. See Hervey A. Juris, "Taking A Look At Banking In The '80s - II," *ABA Banking Journal*, August 1980, pp. 75-77. Ronald L. Miller, "Collective Bargaining in Banking," *The Bankers Magazine*, May-June 1980, pp. 67-74. Matthew Goodfellow, "Three Steps to Bank Unionization," *The Bankers Magazine*, September 1979, pp. 91-95. Ronald L. Miller, "Collective Bargaining in Financial Institutions," *Employee Relations Law Journal*, Vol. 7, No. 3, Winter 1981/1982, pp. 389-413. John G. Kilgour, "Union Organizing in Banking - And What to Do About It," *The Bankers Magazine*, September-October, 1982, pp. 68-72.

[4]In 1980, nonsupervisory jobs represented 77 percent of the total employment in banking. At this time, 37 percent of all bank employees were classified as office and clerical workers. Women staffed 85 percent of these positions and accounted for approximately two-thirds of commercial banking employment. Horst Brand and John Duke, "Productivity in Commercial Banking: Computers Spur the Advance," *Monthly Labor Review*, December 1982, p. 22.

[5]The organizing efforts at Citizen's Bank of Willmar, Minnesota represents an extreme example of this change in attitude.

[6]Trevor Bain and Allan D. Spritzer, "Private Sector Industrial Relations in the South," *Proceedings of the 1981 Spring Meeting*, IRRA, April-May 1981, pp. 536-544.

[7]Jack Fiorito and Charles R. Greer, "Determinants of U.S. Unionism: Past Research and Future Needs," *Industrial Relations*, Winter 1982, p. 12.

[8]Charles P. Barry II, "A Discussion," *Proceedings of the 1981 Spring Meeting*, IRRA, April-May, 1981, pp. 556-558.

[9]Bain and Spritzer, "Private Sector ...," p. 54.

[10]The Spearman rank correlation coefficient adjusted for ties was used to test for randomness in these series. See G. Udny Yule and M.G. Kendall, *An Introduction To The Theory of Statistics*, New York: Hafner Publishing Co., 1968, pp. 264-268. For the subperiods 1962-1969 and 1970-1980, the rank correlation coefficients for the number of representation elections and time were 0.1260 and -0.0472 respectively. Neither coefficient was significant at the 10 percent level or better. The victories series yielded similar results.

[11]Miller, *op. cit.*, p. 404.

[12]OPEIU's involvement with depository institutions should continue or increase over time because it is one of the national unions that have targeted depository institutions, particularly commercial banks, for stepped up organizational efforts during the 1980s. See "AFL-CIO Executive Discusses Bank Drive," *ABA Banking Journal*, February 1981, p. 32.

[13]Kilgour sees this unit (branch) size as the most vulnerable to union organizing activity. "Union Organizing", p. 71.

A NOTE ON BELOW MARKET LOANS

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INTRODUCTION

Prior to mid-1984, interest free loans were a relatively simple way to shift income to a lower bracket taxpayer. This was largely because of favorable judicial decisions that held at bay any income taxation on "imputed" interest that arguably might be associated with such transactions. Thus, although the transfer might constitute a gift, a loan of a large principal sum on which no interest was charged generally could be made with impunity even though the lender failed to generate interest income for the Internal Revenue Service to tax.

A portion of a 1984 First Arkansas Bankstock Corporation sponsored research study by this author traced the development of judicial support and encouragement for this financial planning device, but cautioned that taxpayer complacency was unwarranted because of the speed with which tax law changes can come.[1] Soon after publication of the study, Congressional action all but eliminated the interest free loan.[2] The purpose of this brief article is to review the legislative change so as to update the above-mentioned research study. By the time the present piece is published the changes discussed in it may well have become general knowledge, or they even may have been superseded because tax reform once again is in the wind. Either way, the ever-growing frequency with which tax changes seem to arise merely increases the need for annotations such as the brief one that follows.

THE NEW APPROACH

Apparently, the new rules apply to loans that are intended as a gift of the foregone interest, to compensation-related loans (*e.g.*, between employer and employee), to corporation-shareholder loans, to loans of which is tax avoidance, and to any other loans that Internal Revenue Service may determine will have a significant effect upon the tax liability of either party to the transaction. Though the law seems to be aimed at the loan of money, the latter grant of power to the Internal Revenue Service may have left open the door for extension of the law property loans as well.

The basic approach of the new law is to seize upon the amount of foregone interest in a no-interest or below-market interest loan and attribute tax significance to it. In a demand loan, the foregone interest is measured by the excess of the interest at the Federal short-term rate in effect pursuant to section 1274 (d) of the Internal Revenue Code over the interest payable (if any) on the loan in question.[3] In a term loan, the foregone interest is the excess of the amount loaned over the present value of all payments due under the loan discounted according to the applicable Federal rate in effect under Code section 1274 (d).[4] The applicable rates for the latter are the short-term rate for three-year loans or less, the mid-term rate for three through nine year loans, and the long-term rate for ten year loans and longer.[5]

Generally, the amount foregone is treated as if it were, *first*, transferred by the lender to the borrower (as a gift, a sal-

ary payment, a dividend, etc.) and, *second*, re-transferred by the borrower to the lender as an interest payment to the latter. That is, the non-existent "payment" flows from lender to borrower and its nature is determined by type of transaction in which it is "paid." The non-existent payment then flows back from the borrower to the lender and is predestined by the statute to be treated as if it were interest income to the latter.[6] For gift and demand loans this payment is transferred and re-transferred as of the end of the calendar year.[7] For other loans the imaginary transfer is deemed to occur on the date the loan is made and the re-transfer over the life of the loan.[8]

It is evident that these transfers may cancel each other out but they may not have that effect at all. For example, assume a gift loan from parent to child on which obligation no interest is to be charged. The parent is deemed to have made a gift but he or she is also considered to have interest income in the amount of the foregone interest, so that the transaction is ineffective in lowering the parent's income tax. However, though the child has no imputed income (merely because the foregone interest is a gift and there generally is no income tax to the recipient of a gift) he or she may have a deduction in the amount of the interest deemed to have been repaid by the child to the parent, though it might be necessary for the child to itemize deductions in order to obtain it. Of course, if the child is in a lower marginal bracket than the parent the tax shield provided to the child if the deduction is obtained will be less than the tax burden on the parent imposed by the imputed interest income treatment required by the statute.

Suppose a corporation lends to its shareholder at either no or low interest. The corporate lender will have taxable interest income but might have a non-deductible dividend payment. Its shareholder could have taxable dividend income and deductible interest expense. Similarly, an employer who lends to an employee will have taxable interest income and may have an equal deduction for salary expense. His or her employee may have taxable compensation and a precisely offsetting interest expense.

MITIGATION

Of course, some relief sections are contained in this new law. Within limits, a *de minimis* rule generally excepts compensation related, corporate-shareholder, and individual gift loans on any day that the aggregate amount of outstanding loans does not exceed $10,000.[9] Further, no withholding tax is required on the imputed interest incident to gift or demand loans.[10] Finally, unless tax avoidance is a primary purpose, on any day upon which aggregate outstanding gift loans between individuals do not exceed $100,000 the imputed interest income generally will be limited to the amount of the borrower's net investment income for the year in question.[11] Even so, the complexities introduced by this new tax treatment of interest free loans and low interest loans can fairly be said to inhibit effectively their use as income shifting devices.

CONCLUSION

A major accounting firm has questioned the overall efficacy of the "deficit reducing" 1984 act by noting it was designed to raise $63 billion in fiscal years 1985 to 1987, but that *additional interest* alone on the deficit is expected to be $6 billion during the same period.[12] As to the statute's effect on interest free loans and below-market loans, its evident intent is to discourage their use by replacing simplicity with undue complexity. The amount of revenue enhancement associated with this portion of the law is not known, but its meaningful ex-

istence is problematical especially as alternatives, such as the frequently used short-term or Clifford trust, still exist, at least, for the financial planner who would shift income to lower bracket family members. Apart from the foregoing, a disturbing facet of the new loan legislation is the awareness that, after much expensive litigation, frequent judicial losses, and a general failure to have its own way, the Internal Revenue Service has once again assured itself victory by persuading the Congress to overrule failure in the courts. An earlier attempt at legislation perhaps could have saved countless dollars spent on fruitless taxpayer financed litigation.

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[1]Warren E. Banks, *Estate Planning Commentaries: A Handbook for Arkansas Bank Trust Officers*, The James H. Penick Financial Research Series (Fayetteville: University of Arkansas Bureau of Business & Economic Research, 1984), pp. 89-109.

[2]Deficit Reduction Act of 1984, Pub. Law No. 98-369, 98 Stat. 494 (1984).

[3]I.R.C. section 7872 (e)(1)(A); (f)(2)(B).

[4]I.R.C. section 7872 (e)(1)(B); (f)(2)(A).

[5]M. Hartigan, "New Law Introduces Major Income and Gift Tax Consequences for Interest-free Loans," 33 *TAX. FOR ACCOUNTANTS* 234, 236 (Oct. 1984). A table for relevant rates for January 1, 1985, through June, 1985, has recently been published in Revenue Ruling 84-163, 1984 Int. Rev. Bulletin No. 47, Nov. 19, 1984.

[6]The re-transfer is characterized as *interest income* for gift and demand loans and as *original issue discount* for below market loans other than gift and demand loans; the tax treatment of the latter is similar to that of the former. I.R.C. sections 7872 (a)(1)(B) & (b)(2)(A); 1272 (a).

[7]I.R.C. section 7872 (a)(2).

[8]I.R.C. sections 7872 (b)(1); 1272 (a)(3). See also Hartigan, *supra* note 5.

[9]I.R.C. section 7872 (c)(2) & (3).

[10]I.R.C. section 7872 (f)(9).

[11]I.R.C. section 7872 (d).

[12]*Washington Briefing* (Washington: Touche Ross & Co., Sept. 1984).

AHRP PANEL INDICATORS SUGGEST MILD DOWNTURN IN ARKANSAS ECONOMY

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INTRODUCTION

For some time now the Arkansas Household Research Panel (AHRP) has gathered information from panel members on family financial status, purchase intentions, and perceptions of the Arkansas economy and business conditions. More specifically, panel members were asked to report both their comparisons of present financial status with those of a year ago and expectations and intentions for designated time periods—time periods of interest were "within the next twelve months", "a year from now", and "for the next five years". These kinds of data are gathered quarterly and, in the past, have correlated well with future economic conditions in Arkansas.[1]

Based on an examination of the data gathered during 1982, Darden and Alex suggested that Arkansas was moving toward a recovery in 1983.[2] That movement toward prosperity seems to be short-lived. The examination of data collected during the third quarter of 1983 suggests that more and more Arkansans expected their financial family status to be "worse" during the latter part of 1984 and the first part of 1985 when compared with similar periods of 1983. In addition, fewer Arkansans seem to be satisfied with their present financial status. For example, in September 1984, 31% of the household panelists felt that their family financial status was better than it was a year ago; even so, this was a decrease from 36.3% in June of 1984. In fact, much of the recent data suggests that there may well be a mild downturn in the Arkansas economy over the next year. Table 1 contains data that can be interpreted to support this position.

OVERALL CONDITIONS

Table 1 contains the quarterly indices of the major economic and social indicators collected over the last two years by the Arkansas Household Research Panel. As can be seen from Table 1, the third quarter of 1984 shows a significant down turn in many areas. For example, household members perceived short run business conditions as being substantially worse in Fall 1985 or one year from the time of the interview. Even more disturbing was the fact that Arkansans were pessimistic about their long run financial status. This is evident from an examination of the trend for anticipated durable goods purchases within the next twelve months. (Durable goods purchases, in Arkansas, are usually a good indicator as to investment.) Referring to Table 1, the index reflecting durable goods purchases is sub-

TABLE 1
INDICES BY QUARTER

	1982	1983				1984		
Index	QTR4	QTR1	QTR2	QTR3	QTR4	QTR1	QTR2	QTR3
Family Fin. Status	.965	1.01	1.08	1.01	1.04	1.08	1.07	.996
Fut. Fam. Fin. Cond.	1.012	1.03	1.08	1.02	1.02	1.01	1.02	1.02
Current Bus. Cond.	.825	1.01	1.26	1.18	1.20	1.21	1.21	1.01
Short Run Bus. Cond.	.901	.968	1.02	1.00	.984	.990	1.01	.953
Long Run Fin. Status	.935	.947	.967	.955	.924	.926	.930	.931
Durable Goods Pur.	.886	.947	1.01	.979	1.03	1.03	1.01	.937
Life Ins. Purchase	.993	.986	.988	.992	.989	.973	.969	.975
Real Est. Inv. Pur.	.934	.918	.941	.927	.927	.920	.917	.919
Stocks & Bonds Pur.	1.033	1.055	1.079	1.074	1.075	1.053	1.049	1.051
Home Purchase	1.018	1.027	1.038	1.026	1.022	1.026	1.005	1.020

stantially down suggesting that Arkansans intend to decrease durable goods purchases within the next twelve months. Another way of interpreting the decrease in the durable goods purchase index is that more Arkansans now perceive the present as a poor time to buy durable goods. All these indices strongly suggest that the Arkansas economy will level off and perhaps go into a mild decline over the next two years. This is not to say that influences from either outside or within the state may not interject themselves and change this forecast. In fact, investments by government or private business could have a substantial positive influence on the direction of the Arkansas economy.[3]

The data shown in Tables 2 through 10 provide particulars of the present and the future Arkansas business forecasts. Table 2 shows a comparison of the panel household's present family financial status with that of a year ago. Table 3 compares expected family financial status with that actually perceived by respondents. Table 4 indicates intentions to purchase durable goods by quarter for the last seven years. Table 5 shows intentions by quarter for the last five years to purchase life insurance within the next twelve months. Tables 6 and 7 respectively show intentions to purchase real estate for investment purposes within the next twelve months and intentions to purchase securities within the next twelve months. Tables 8 and 9 respectively show panelists' expectations of the Arkansas economy over the next 5 years and the comparison of present Arkansas business conditions with those of a year ago. Table 10 contains panel members' perceptions of Arkansas business conditions over the next twelve months. The significance of these data are examined in greater detail below.

FAMILY FINANCIAL STATUS: CURRENT

As already indicated, Table 2 shows family financial status compared to a year ago. Examination of the last three quarters of 1984 suggests that there were succeedingly increasing percentages of Arkansan households who thought that their present family financial status was worse when compared to a year ago. In fact, approximately 22.1% of Arkansan households in the AHRP panel believed that their present family financial status was worse in September 1984 than in September 1983. Clearly, Arkansan households are having second thoughts about their present financial status. One factor in October 1984 that may have contributed to this negative trend was dissonance about

TABLE 2
FAMILY FINANCIAL STATUS COMPARED TO A YEAR AGO

Month	Year	Better Off (%)	Same (%)	Worse Off (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	45.3	28.8	25.9	1.054	1.138
Jun	78	39.9	33.4	26.8	1.019	1.100
Sep	78	34.7	34.7	30.6	0.972	1.067
Jan	79	34.2	33.2	32.5	0.960	1.066
Mar	79	26.1	31.3	42.6	0.879	0.949
Jun	79	25.6	31.9	42.5	0.878	0.948
Sep	79	21.7	40.0	38.3	0.879	0.965
Jan	80	22.2	42.7	35.1	0.895	0.993
Mar	80	24.3	37.0	38.7	0.888	0.959
Jun	80	19.8	44.6	35.6	0.882	0.952
Sep	80	20.6	45.9	33.5	0.895	0.982
Jan	81	18.5	40.3	41.2	0.855	0.948
Mar	81	21.8	45.5	32.7	0.903	0.975
Jun	81	25.9	45.6	28.5	0.940	1.014
Sep	81	20.5	48.3	31.2	0.904	0.992
Jan	82	22.5	44.5	33.1	0.904	1.003
Mar	82	28.4	44.0	27.6	0.956	1.032
Jun	82	31.2	49.7	19.1	1.014	1.094
Sep	82	26.4	41.6	32.0	0.926	1.016
Jan	83	29.2	44.1	26.6	0.965	1.070
Mar	83	31.9	48.4	19.7	1.014	1.095
Jun	83	37.3	48.4	14.3	1.076	1.161
Sep	83	30.9	49.9	19.2	1.011	1.110
Jan	84	32.8	50.9	16.3	1.038	1.151
Mar	84	37.2	50.0	12.8	1.084	1.171
Jun	84	36.3	49.5	14.2	1.070	1.155
Sep	84	30.9	47.0	22.1	0.996	1.093

the impending presidential election. Nevertheless, in the past, these kinds of trends have suggested down turns in the Arkansas economy.

FAMILY FINANCIAL STATUS: EXPECTED AND ACTUAL

The data in Table 3 support the authors' contentions in the previous section of this article. Here family financial status as forecasted one year ago is compared to that actually reported by Arkansan households at the time of the study. Table 3 conveniently breaks the data into "expected" and "actual" perceptions of family financial status by response category—"better", "same", and "worse". The percentage shown in the "expected" column of each category indicates the ratio of panel members who forecasted their financial status to be in the same category in the compared year-later "actual" period. The "actual" column for each category shows the percentage of respondents for that period who think their present family financial status corresponds to the descriptive category.

The interesting aspect of Table 3, is that expectations are decreasing as fast as actual evaluations of household members' present status. As can be seen from Table 3, the percentage of households "expecting" the economy to be better in 1984 decreased from 39% in June to 34% in September. The "actual" assessment in 1984

TABLE 1
ANNUAL NUMBER OF REPRESENTATION ELECTIONS IN THE SOUTHERN DEPOSITORY INSTITUTIONS SECTOR, 1962-1980

	Commercial Banks		Savings and Loan Associations		Credit Unions		Total Sector	
Year	Elections	Union Victories	Elections	Union Victories	Elections	Union Victories	Elections	Union Victories
1980	1	0	0	0	2	0	3	0
1979	0	0	0	0	1	0	1	0
1978	1	0	0	0	0	0	1	0
1977	0	0	0	0	4	4	4	4
1976	1	1	0	0	0	0	1	1
1975	0	0	0	0	2	2	2	2
1974	2	1	0	0	1	1	3	2
1973	1	0	0	0	1	1	2	1
1972	2	2	1	1	1	0	4	3
1971	1	1	0	0	1	0	2	1
Number of Elections and Victories 1962-1970	1	0	1	0	1	0	3	0
Number of Elections as a Percentage of Total and Victories as a Percentage of Elections, 1962-1980	38.5%	50.0%	7.6%	50.0%	53.8%	57.1%	100.0%	53.8%
Number of Elections as a Percentage of Total and Victories as a Percentage of Elections, 1971-1980	39.1%	55.5%	4.4%	100.0%	56.5%	61.5%	100.0%	60.9%
Number of Elections as a Percentage of Total and Victories as a Percentage of Elections, 1962-1970	33.3%	0.0%	33.3%	0.0%	33.4%	0.0%	100.0%	0.0%

Source: Compiled from data provided by the National Labor Relations Board.

TABLE 3
ELECTION RESULTS CLASSIFIED BY UNIT SIZE FOR THE SOUTHERN DEPOSITORY INSTITUTIONS SECTOR, 1962-1980

	Commercial Banks*				Nonbank Depository Intermediaries			
		Average Size of Unit				Average Size of Unit		
Size Class	Number of Election Units	All Elections	Union Victories	Union Losses	Number of Election Units	All Elections	Union Victories	Union Losses
1 - 10 Employees	3	7.7	10.0	6.5	4	6.2	5.0	6.5
11 - 20 Employees	3	18.0	17.5	19.0	3	12.0	12.0	†
21 - 50 Employees	6	35.7	41.5	32.7	3	30.0	30.0	†
More than 50 Employees					3	140.3	111.0	155.0
Overall Average		24.2	25.6	23.3		47.2	33.9	66.0

Source: Compiled from data provided by the National Labor Relations Board.
†Indicates no union victories or no union losses.
*Data on the exact size of the election unit for one commercial bank was unavailable so it was omitted from the analysis in this table.

TABLE 3
FAMILY FINANCIAL STATUS: PREDICTED AND ACTUAL

	Better (%)		Same (%)		Worse (%)	
Period	Expected 1983	Actual 1984	Expected 1983	Actual 1984	Expected 1983	Actual 1984
Dec-Feb	33.4	32.8	53.3	50.9	13.4	16.3
Mar-May	33.3	37.2	56.9	50.0	9.8	12.8
Jun-Aug	38.7	36.3	54.4	49.5	6.9	14.2
Sep-Nov	33.8	30.9	54.5	47.0	11.7	22.1

was 36% in June, dropping to 31% percent in September. Thus, one year ago, there was a decided drop in expectations with respect to family financial status. In addition, there was a drop in actual evaluations of the family financial status of Arkansan households one year later. These conclusions are reinforced when one looks at the "worse" column. The percentage of panel households predicting in 1983 that the economy would be worse in 1984 increased from 7.9% in June 1983, to 11.7% in September 1984. The actual assessments for the "worse" category were given by 14.2% of the households in June and nearly twice that percentage in September. Thus, the predictions one year ago and the evaluations in the actual quarters are consistent; both indicate that the economy is not only beginning to level off but that it is also beginning to exhibit a mild decline.

INTENTIONS TO PURCHASE

As already suggested, an important indicant of future economic expansion is consumer intentions to purchase durable goods. Table 4 shows the quarterly information that panel members provided to the Arkansas Household Research Panel. Respondents were allowed to choose between "good time to buy", "don't know - depends", and "bad time to buy". Over the last year household heads increasingly "don't know" about their intentions to buy durable goods. Fully 55% of households are uncertain about the purchase of durables for their homes. In addition, the percentage of panel members choosing the response "good time to buy" dropped from 46.2% in January, to 34% in September 1984. There is a corresponding percentage increase in "bad time to buy" for the same time period. In general, households report that they are postponing decisions to buy durable goods and their expectations about the economy are not positive.

Table 5 shows household panel members' intentions to purchase insurance within the next twelve months. Here we can see that there is a slight increase in plans to buy life insurance within the next twelve months. In addition, there is a slight decrease for those with plans not to purchase life insurance. Intentions to buy stocks, bonds, mutual funds, etc., are somewhat augmented by household members' plans to purchase real estate for investment purposes over the next twelve months. Table 6 contains percentages of aggretate responses to questions about panel members intentions to purchase real estate for investment. The percentage of panel members who plan to purchase real estate for investment purposes within the next twelve months gradually increased over 1984 (beginning with 1.8% indicating plans to buy and increasing to 3.5% with plans to buy in September). In addition, the percentage of panel members who do not plan to invest in real estate also gradually increased during 1984 (beginning with 75.5% indicating no plans to buy in

TABLE 4
INTENTION TO PURCHASE DURABLE GOODS

Month	Year	Good Time To Buy (%)	Don't Know Depends (%)	Bad Time To Buy (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	44.9	45.2	9.9	1.006	1.169
Jun	78	40.5	49.7	9.8	0.981	1.140
Sep	78	44.4	45.4	10.2	1.001	1.197
Jan	79	47.3	41.5	11.2	1.013	1.188
Mar	79	14.5	48.3	37.2	0.745	0.866
Jun	79	19.7	50.0	30.3	0.788	0.916
Sep	79	17.8	45.7	36.5	0.759	0.908
Jan	80	17.2	51.2	31.6	0.774	0.908
Mar	80	36.6	40.6	22.8	0.892	1.036
Jun	80	29.9	46.1	24.0	0.855	0.994
Sep	80	21.1	47.9	31.0	0.791	0.946
Jan	81	23.8	46.7	29.5	0.807	0.946
Mar	81	25.5	51.2	23.3	0.839	0.975
Jun	81	28.0	46.1	25.9	0.839	0.975
Sep	81	25.7	49.1	25.3	0.832	0.995
Jan	82	26.3	49.1	24.6	0.837	0.982
Mar	82	28.5	45.4	26.1	0.840	0.976
Jun	82	29.2	47.9	22.9	0.857	0.996
Sep	82	31.4	42.8	25.8	0.854	1.021
Jan	83	34.4	43.9	21.7	0.886	1.039
Mar	83	37.2	50.3	12.5	0.947	1.101
Jun	83	42.9	49.5	7.6	1.008	1.172
Sep	83	39.9	50.7	9.4	0.979	1.171
Jan	84	46.2	45.5	8.2	1.025	1.202
Mar	84	46.3	46.8	6.9	1.034	1.201
Jun	84	43.4	48.7	7.9	1.009	1.173
Sep	84	34.1	54.7	11.2	0.937	1.121

January and increasing to 79.5% with no plans to buy in September).

Similarly, Table 7 shows panel members intentions to purchase stocks, bonds, mutual funds, etc., within the next twelve months. During 1984 there was a decline in the percentage of panel members intending to buy bonds within the next twelve months. In January, over 20% of the household panel members had plans to buy securities; by the end of the year this percentage dropped to 17.8%. These findings are consistent with the anticipated decrease in the price of securities over the next few years. It suggests that household investors have expectations that there will be a downturn in the economy, leading to decreases in the prices of securities. As a result, household investors would tend to put off purchases of securities until their prices are at their lowest levels.

Intentions to purchase securities, real estate for investment purposes, life insurance and durable goods can be interpreted as reflecting unfavorable expectations on the part of Arkansas Household Research Panel members with respect to the future state of the economy. When tied in with expectations and reported states of their family financial status, this leads the authors to a less than favorable forecast

about the Arkansas economy over the next eighteen months. These predictions, of course, can be easily offset by exogenous business investment; social investment by state, local, and federal governments; or changes in governmental economic policy.

LONG TERM ECONOMIC FORECAST

While a mild downturn or leveling off of the economy is forecasted over the next eighteen months to two years, Table 8 contains information that reflects the long term view of Arkansans. It contains quarterly forecasts by respondents from 1978 through 1984. The quarterly percentages of those responding to good and bad times in 1983 were not as great as those in 1984. From Table 8 it can be noted that for all four quarters of 1984 the percentages were higher than the corresponding percentage responses to "good and bad times" in 1983. The implication of this percentage increase is that household respondents are less confident of the future. Part of the explanation for this lack of confidence could well rest in the fact that the presidential election was held at the end of 1984. Another factor may well be that Arkansan residents are becoming less sure of the promise of continued economic prosperity over the longer run.

EXPECTED BUSINESS CONDITIONS & IMPLICATIONS

This article shows that many short run indicators of economic activity are pointing to a leveling off or mild down turn in the Arkansas economy. Augmenting this pessimistic outlook is the information contained in Table 9. Here it can be shown that when Arkansas household panel members compared present Arkansas business conditions with those of a year ago most of them feel that the economy is either the same or worse off. As a matter of fact, the percentage of panel members feeling that business conditions compared to a year ago are "worse off" increased from approximately 11% in January of 1984 to 22% in September of 1984. In addition, the percentage of panel members feeling that the economy is "better off" decreased from 54.4% in January of 1984 to 35.3% in September of 1984.

It can be seen from Table 10 that panelists' perceptions about business conditions for twelve months from the time of each quarterly survey become less optimistic in the September 1984 survey. The adjusted index for this indicator dropped sharply (from 1.013 in June 1984 to .953 in September 1984). Clearly, household members perception of the direction of the economy is pessimistic. In fact, the increase in the pessimism of panel members is to an extent that may not be explained by the uncertainties of the November 1984 presidential election.

While these data indicate a leveling off or slight downturn in business activity over the next 18 months, they nevertheless suggest that businesses should make slight adjustments in their investment and inventory planning approaches. Durables and other large-ticketed products are not likely to have the same level of demand. Service firms, such as life insurance agencies, brokerage houses, and real estate firms, may find their business activities leveling-off or turning slightly downward.

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[1]Darden, William R., and Alex, Theodore C., "January Indicators Suggest Recovery in Arkansas for 1983", *Arkansas Business and Economic Review*, Volume 16, No. 1, pp. 30-35.

[2]Ibid.

[3]Gordon, Robert J., *Macroeconomics*, Boston: Little Brown and Co., 1981, pp. 87.

TABLE 5
INTENTION TO PURCHASE LIFE INSURANCE (WITHIN 12 MONTHS)

Month	Year	Plan To Buy (%)	Maybe Depends (%)	Don't Plan To Buy (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	5.1	11.6	83.3	1.006	1.024
Jun	78	4.9	8.9	86.2	0.995	1.012
Sep	78	6.4	6.7	86.9	0.998	1.020
Jan	79	5.7	8.6	85.7	1.000	1.013
Mar	79	3.6	6.2	90.2	0.977	0.994
Jun	79	4.3	7.8	87.9	0.987	1.004
Sep	79	4.2	6.9	88.9	0.984	1.005
Jan	80	2.9	8.9	88.2	0.981	0.994
Mar	80	2.3	7.1	90.6	0.971	0.988
Jun	80	3.2	5.5	91.3	0.972	0.988
Sep	80	2.2	7.9	89.9	0.973	0.994
Jan	81	4.5	5.3	90.2	0.980	0.993
Mar	81	3.9	6.1	90.0	0.979	0.995
Jun	81	3.8	6.5	89.7	0.979	0.996
Sep	81	2.9	2.7	94.4	0.961	0.981
Jan	82	3.7	4.9	91.4	0.973	0.986
Mar	82	4.2	5.3	90.5	0.978	0.995
Jun	82	4.4	6.6	89.0	0.984	1.000
Sep	82	3.8	6.8	89.4	0.980	1.002
Jan	83	5.4	7.1	87.5	0.993	1.006
Mar	83	4.9	6.1	89.0	0.986	1.002
Jun	83	5.4	5.9	88.7	0.988	1.005
Sep	83	5.5	6.6	87.9	0.992	1.013
Jan	84	4.5	7.8	87.7	0.989	1.002
Mar	84	3.2	5.7	91.1	0.973	0.989
Jun	84	2.2	6.7	91.1	0.969	0.986
Sep	84	3.5	5.7	90.8	0.975	0.996

TABLE 6
INTENTION TO PURCHASE REAL ESTATE FOR INVESTMENT (WITHIN 12 MONTHS)

Month	Year	Plan To Buy (%)	Maybe Depends (%)	Don't Plan To Buy (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	14.2	24.7	61.1	1.027	1.066
Jun	78	10.9	24.6	64.5	1.000	1.048
Sep	78	11.1	23.6	65.3	0.998	1.051
Jan	79	8.1	24.0	67.9	0.976	1.025
Mar	79	8.4	23.4	68.2	0.976	1.012
Jun	79	6.5	21.8	71.7	0.956	1.002
Sep	79	7.5	20.2	72.3	0.958	1.009
Jan	80	6.1	22.6	71.3	0.956	1.004
Mar	80	4.2	16.0	79.8	0.920	0.955
Jun	80	3.7	17.6	78.7	0.922	0.966
Sep	80	2.8	21.2	76.0	0.928	0.978
Jan	81	3.9	18.1	78.0	0.925	0.972
Mar	81	4.4	21.2	74.4	0.939	0.974
Jun	81	4.6	21.6	73.8	0.942	0.987
Sep	81	3.1	17.2	79.7	0.917	0.966
Jan	82	2.9	17.7	79.4	0.917	0.963
Mar	82	3.8	17.2	79.0	0.922	0.956
Jun	82	2.8	16.3	80.9	0.912	0.956
Sep	82	3.6	16.5	79.9	0.918	0.967
Jan	83	5.5	17.4	77.1	0.934	0.981
Mar	83	3.4	16.9	79.7	0.918	0.952
Jun	83	4.8	21.0	74.2	0.941	0.986
Sep	83	3.2	19.9	76.9	0.927	0.976
Jan	84	1.8	22.7	75.5	0.927	0.973
Mar	84	3.0	18.2	78.8	0.920	0.954
Jun	84	2.8	17.7	79.5	0.917	0.960
Sep	84	3.5	17.0	79.5	0.919	0.968

TABLE 7
INTENTION TO PURCHASE STOCKS, BONDS, MUTUAL FUNDS, ETC.
(WITHIN 12 MONTHS)

Month	Year	Plan To Buy (%)	Maybe Depends (%)	Don't Plan To Buy (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	4.3	5.1	90.6	0.889	0.902
Jun	78	17.4	20.3	62.3	1.040	0.996
Sep	78	20.4	15.5	64.1	1.045	1.006
Jan	79	18.3	19.7	62.0	1.045	1.007
Mar	79	16.9	18.1	65.0	1.027	1.041
Jun	79	15.6	21.6	62.8	1.030	0.987
Sep	79	15.2	20.7	64.1	1.023	0.985
Jan	80	18.0	19.2	62.8	1.040	1.003
Mar	80	15.8	15.3	68.9	1.006	1.021
Jun	80	18.0	16.9	65.1	1.030	0.988
Sep	80	17.4	21.5	61.1	1.045	1.006
Jan	81	15.5	21.1	63.4	1.027	0.990
Mar	81	17.2	19.7	63.1	1.036	1.051
Jun	81	20.4	22.4	57.2	1.075	1.030
Sep	81	16.3	22.8	60.9	1.041	1.002
Jan	82	16.8	20.3	62.9	1.034	0.997
Mar	82	18.2	18.2	63.7	1.037	1.052
Jun	82	17.9	18.8	63.3	1.038	0.994
Sep	82	17.6	18.7	63.7	1.035	0.996
Jan	83	17.8	17.8	64.4	1.033	0.995
Mar	83	18.2	22.2	59.6	1.055	1.070
Jun	83	21.7	20.7	57.6	1.079	1.034
Sep	83	20.8	21.2	58.0	1.074	1.034
Jan	84	20.3	22.5	57.2	1.075	1.036
Mar	84	18.9	20.4	60.7	1.053	1.068
Jun	84	18.2	20.9	60.9	1.049	1.005
Sep	84	17.8	22.1	60.1	1.051	1.012

TABLE 8
ARKANSAS ECONOMY FOR THE NEXT 5 YEARS

Month	Year	Good Times (%)	Good & Bad Times (%)	Bad Times (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	34.8	57.3	7.9	1.018	1.127
Jun	78	32.7	61.5	5.8	1.019	1.124
Sep	78	30.6	61.1	8.2	0.993	1.089
Jan	79	26.8	64.6	8.5	0.971	1.076
Mar	79	19.3	67.2	13.6	0.908	1.004
Jun	79	13.1	69.0	17.9	0.861	0.950
Sep	79	15.7	72.3	12.0	0.898	0.985
Jan	80	14.4	71.9	13.7	0.885	0.981
Mar	80	5.5	75.3	19.2	0.825	0.913
Jun	80	7.6	81.5	10.8	0.868	0.957
Sep	80	11.5	81.3	7.2	0.901	0.988
Jan	81	8.2	77.9	13.8	0.858	0.951
Mar	81	10.8	79.1	10.2	0.884	0.978
Jun	81	11.0	81.0	8.0	0.895	0.987
Sep	81	8.5	79.1	12.4	0.865	0.948
Jan	82	10.0	74.1	15.8	0.857	0.950
Mar	82	10.5	77.7	11.8	0.876	0.970
Jun	82	9.9	81.1	9.0	0.886	0.977
Sep	82	12.8	76.99	10.2	0.893	0.980
Jan	83	17.8	75.8	6.3	0.935	1.037
Mar	83	18.2	77.3	4.5	0.947	1.047
Jun	83	20.4	76.9	2.7	0.967	1.067
Sep	83	19.0	77.3	3.7	0.955	1.047
Jan	84	13.4	82.3	4.3	0.924	1.024
Mar	84	13.0	83.6	3.4	0.926	1.025
Jun	84	15.0	80.4	4.6	0.930	1.026
Sep	84	15.7	79.2	5.1	0.931	1.021

TABLE 9
BUSINESS CONDITIONS COMPARED TO A YEAR AGO

Month	Year	Better Off (%)	Same (%)	Worse Off (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	33.9	51.1	15.1	1.041	1.236
Jun	78	32.0	50.6	17.4	1.018	1.241
Sep	78	26.3	55.6	18.1	0.983	1.201
Jan	79	24.5	54.8	20.6	0.962	1.182
Mar	79	21.7	53.2	25.1	0.928	1.101
Jun	79	10.8	40.8	48.4	0.794	0.968
Sep	79	7.4	49.9	42.7	0.802	0.980
Jan	80	8.7	47.6	43.7	0.803	0.986
Mar	80	4.0	27.2	68.8	0.712	0.845
Jun	80	4.1	19.7	76.2	0.693	0.846
Sep	80	8.9	30.8	60.3	0.750	0.917
Jan	81	3.5	28.9	67.6	0.714	0.878
Mar	81	9.6	34.6	55.8	0.766	0.909
Jun	81	16.2	42.5	41.3	0.838	1.022
Sep	81	9.8	36.8	53.3	0.775	0.947
Jan	82	3.4	20.7	75.9	0.692	0.850
Mar	82	5.4	61.0	33.5	0.827	0.981
Jun	82	9.1	41.5	49.4	0.785	0.957
Sep	82	5.3	24.5	70.2	0.712	0.870
Jan	83	20.9	29.5	49.6	0.825	1.013
Mar	83	47.2	34.8	18.0	1.104	1.311
Jun	83	60.7	28.5	10.8	1.257	1.533
Sep	83	53.6	32.8	13.6	1.179	1.440
Jan	84	54.4	34.4	11.2	1.203	1.478
Mar	84	55.0	34.5	10.5	1.213	1.440
Jun	84	53.2	37.2	9.6	1.206	1.471
Sep	84	35.3	42.7	22.0	1.010	1.235

ECONOMIC EDUCATION: A CONTINUING COMMENTARY

ECONOMIC PROGRESS IN ARKANSAS AND THE DEFICIT IN THE FEDERAL BUDGET

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Arkansas is not doing well economically. Despite our improving national image as a state on the upswing with commitment to quality in public education and willingness to tax ourselves to support it, Arkansas is economically troubled. Throughout the recovery from the most recent recession, Arkansas' unemployment rate has consistently been a percentage point or more above the national rate. The state has been shaken by plant closings from Russellville to Osceola. Agriculture, so basic to the state's economy, has been plagued by a cost-price squeeze and aggravated by loss of foreign markets. The real culprit may be the deficit in the federal budget.

There is general recognition among economists that the federal budgetary deficit has undesirable impacts on the American economy as a whole. As the economy moves toward full employment, inflation will be rekindled if the monetary authority expands the money supply to accommodate increased demand. On the other hand, crowding-out of private investment will occur if monetary authorities maintain tight money. The Federal Reserve's apparent commitment to hold the line against inflation will result in tight monetary policy, crowding-out, and continued high real interest rates.

Recent declines in nominal interest rates have masked the fact that real interest rates are up. Since the interest rate received by the lender should include a factor to cover inflation as well as a return for the risk of lending, we can define the real interest rate as the nominal rate minus inflation. As interest rates have fallen in the last few years, inflation has declined at a more rapid rate, so that the real interest rates are up.

Higher real interest rates have several important effects. Some investments become infeasible, especially those of small struggling business enterprises. Certain industries are particularly affected, for example, housing and suppliers of building materials. Also the dollar is strengthened in international monetary markets thereby making American exports more expensive and less competitive.

Because of higher interest rates in the United States, foreign funds are attracted to short-term investments in this country. The resulting increased demand for dollars in foreign exchange markets forces up the price of dollars in terms of other currencies. Higher priced dollars make American goods more expensive abroad and foreign goods cheaper here. The recent record deficits in our balance of trade are due primarily to this situation.

Arkansas is especially hard hit by these developments. The state's economy is heavily dependent on forestry and agriculture: both are adversely affected by dif-

ferent impacts of relatively high real interest rates. Arkansas' forestry industry rises and falls with the nation's housing industry; and with continued record deficits putting upward pressure on real interest rates, housing and lumbering will slump. Other Arkansas industries tied to housing will also feel the pinch.

Arkansas agriculture depends on foreign markets for much of its prosperity but the highly valued dollar is overpricing our rice and soybeans relative to produce of foreign competitors. We are losing our markets abroad and we may find it difficult to regain them even when the exchange rate comes down.

As an economically developing state, Arkansas is adversely affected to a greater degree by high real interest rates than her more developed sister states. Many Arkansas industries are labor intensive and such industries are especially pressed by foreign competitors when the dollar is highly valued in international monetary markets. Cases in point are the textiles and shoe industries. More capital intensive and technologically sophisticated industries are less vulnerable to foreign competitors.

Also, home grown businesses in Arkansas tend to be smaller and more dependent on outside financing. Large corporations generate more of their investment funds internally and have more ready access to large financial markets. High real interest rates disproportionally hinder the typically small Arkansas firm.

All of these factors taken together are squeezing the Arkansas economy; and despite the best efforts of the Governor's office, there may be little we, in Arkansas, can do about it. It is in the larger national arena that we must seek a solution to the Federal deficit.

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

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ARKANSAS ECONOMY: Q-III, 1984 AND PROJECTED Q-IV, 1984

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Consumer spending in the third quarter 1984 did not generate the buoyancy that had been expected. Consequently, for both the United States and Arkansas, the economic indicators were mixed.

In Arkansas, Net New Savings and Total Employment showed small decreases (−0.4 and −1.4 percent, respectively); Residential Construction Contracts and Total New Loans indicated large decreases (−11.3 and −18.2 percent, respectively). On the positive side, Value Added by Manufacture showed a small increase (+1.5 percent); Personal Income and Total Waterborne Commerce were up moderately (+3.2 and +6.1 percent, respectively); Nonresidential Construction Contracts, Internal Waterborne Commerce, and Cash Receipts indicated large increases (+11.4, +15.8, and +33.8 percent, respectively). Note that the unemployment rate fell and Total Employment was at its third highest level in the past ten years.

Nationally, Employment, Nonresidential Construction Contracts, and the Production Index showed small gains (+0.1, +0.3, and +1.6 percent, respectively); Personal Income and Cash Receipt reflected moderate increases (3.2 and 6.2 percent, respectively); but Residential Construction Contracts showed a large decrease (−11.3 percent. The unemployment rate held steady (7.3 percent) although employment had a small rise.

Among the states, Arkansas enjoyed the second largest percentage increase in Personal Income for the third quarter. Because farm income is subject to erratic changes, a check on nonfarm personal income shows that the percentage increase for the period for Arkansas ranked 13th nationally.

For Q-IV, 1984 Consumer spending is still expected to expand thereby giving an economic boost to both Arkansas and the United States. Generally, economic indicators should reflect small to modest gains except for construction contracts and Cash Receipts which usually reflect substantial valatily from quarter to quarter.

TABLE 10
BUSINESS CONDITIONS FOR THE NEXT 12 MONTHS IN ARKANSAS

Month	Year	Good Times (%)	Good & Bad Times (%)	Bad Times (%)	Base Year 1978 Index	Seasonal Adj. Index
Mar	78	32.9	55.6	11.5	1.014	1.179
Jun	78	33.9	56.5	9.7	1.031	1.234
Sep	78	31.3	56.0	12.7	0.999	1.133
Jan	79	22.5	66.1	11.4	0.959	1.109
Mar	79	16.7	57.8	25.5	0.868	1.009
Jun	79	7.6	58.6	33.8	0.801	0.959
Sep	79	11.3	63.1	25.6	0.846	0.959
Jan	80	11.1	64.9	24.0	0.851	0.984
Mar	80	2.3	56.3	41.4	0.758	0.881
Jun	80	5.6	64.8	29.6	0.809	0.968
Sep	80	10.3	71.0	18.6	0.870	0.986
Jan	81	5.7	61.7	32.6	0.798	0.924
Mar	81	5.7	72.4	21.9	0.838	0.974
Jun	81	5.7	47.1	47.1	0.751	0.898
Sep	81	5.7	70.7	23.6	0.832	0.943
Jan	82	5.0	59.6	35.3	0.787	0.910
Mar	82	5.7	65.3	28.9	0.812	0.944
Jun	82	4.1	76.7	19.2	0.842	1.008
Sep	82	7.1	69.7	23.2	0.839	0.951
Jan	83	10.7	77.5	11.8	0.901	1.043
Mar	83	18.4	76.1	5.5	0.968	1.126
Jun	83	25.8	70.7	3.5	1.020	1.220
Sep	83	24.7	69.9	5.4	1.003	1.137
Jan	84	22.8	70.3	6.9	0.984	1.138
Mar	84	20.9	75.2	3.9	0.990	1.151
Jun	84	24.3	72.5	3.2	1.013	1.212
Sep	84	19.1	71.7	9.2	0.953	1.081

EMPLOYMENT

Base Year to Date and Quarterly Changes in Total Employment, Arkansas and United States

Seasonally adjusted, percent. Base Year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Arkansas	+ 44.6	+ 2.8	+ 3.2	+ 0.9	− 1.4
United States	+ 41.5	+ 0.9	+ 1.2	+ 1.4	+ 0.1

Employment by Major Industry Group in Arkansas, and Unemployment Rate, Arkansas and United States

Seasonally adjusted, units — Actual Rate, Percent

TIME PERIOD	EMPLOYMENT				UNEMPLOYMENT RATE	
	Wage and Salary		Agricultural	Total	Arkansas	United States
	Manufacturing	Nonmanufacturing				
1977	208,900	483,400	62,800	876,000	6.6	7.1
1978	216,500	507,350	61,250	886,000	6.3	6.1
1979	217,750	526,700	65,800	926,000	6.2	5.8
1980	210,050	540,400	65,100	923,000	7.6	7.1
1981	212,100	536,150	64,100	936,000	9.1	7.6
1982	195,625	525,925	63,440	919,000	9.7	9.5
1983	199,880	531,265	62,395	920,730	9.5	9.7
1984, Q-I	208,610	556,790	62,935	958,135	10.0	8.4
Q-II	209,685	558,940	61,420	966,544	8.8	7.3
Q-III	211,250	560,310	60,820	952,670	8.5	7.3

PERSONAL INCOME

Base Year to Date and Quarterly Changes in Personal Income, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Arkansas	+ 448.2	+ 2.4	+ 4.1	+ 0.1	+ 3.2
United States	+ 384.1	+ 2.6	+ 2.9	+ 2.1	+ 2.1

Personal Income in Arkansas

Seasonally adjusted, millions of dollars

	1977	1978	1979	1980	1981	1982	1983	1984
Quarter								
Jan-Mar	2,837	3,118	3,724	4,014	4,507	4,786	5,060	5,619
Apr-Jun	2,948	3,208	3,759	4,002	4,606	4,811	5,157	5,626
Jul-Sep	2,984	3,315	3,859	4,169	4,800	4,866	5,264	5,805
Oct-Dec	3,070	3,406	3,963	4,288	4,813	4,968	5,394	
Annual	11,839	13,047	15,305	16,473	18,726	19,431	20,875	

VALUE ADDED BY MANUFACTURE

Base Year to Date and Quarterly Changes in Manufacturing, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Arkansas	+ 352.4	− 2.3	+ 10.5	+ 0.6	+ 1.5
United States	+ 65.7	+ 2.4	+ 2.8	+ 2.0	+ 1.6

Value Added by Manufacture in Arkansas

Seasonally adjusted, millions of dollars

Quarter	1977	1978	1979	1980	1981	1982	1983	1984	Not seasonally adjusted 1984
Jan-Mar	1,158.2	1,392.3	1,557.6	1,660.6	1,687.4	1,500.7	1,525.9	1,736.3	1,622.7
Apr-Jun	1,226.4	1,445.9	1,547.7	1,520.5	1,656.6	1,505.2	1,544.7	1,747.5	1,731.2
Jul-Sep	1,234.1	1,411.2	1,505.9	1,545.0	1,599.5	1,497.0	1,608.5	1,773.2	1,903.8
Oct-Dec	1,248.6	1,391.3	1,498.2	1,589.6	1,530.9	1,462.1	1,571.3		
Annual	4,867.3	5,640.7	6,109.4	6,315.7	6,474.4	5,965.0	6,250.4		

LABOR FORCE ESTIMATES
October 1984, not seasonally adjusted

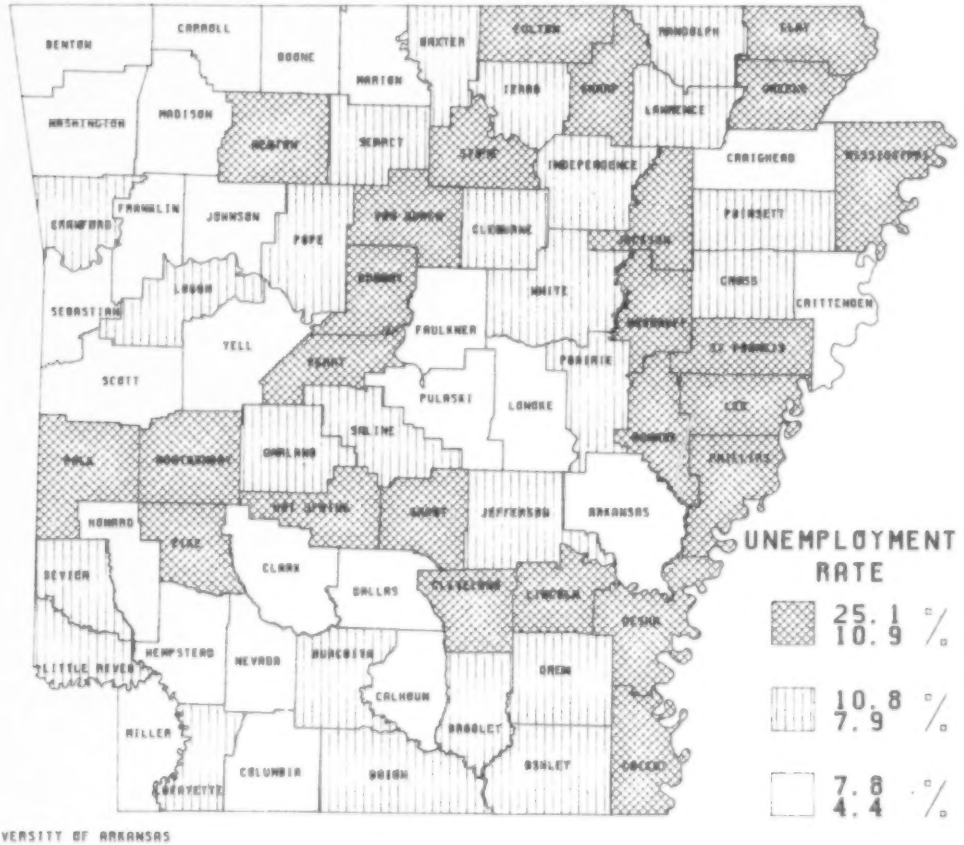
State and SMSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES	114,250,000	7.0	106,262,000
STATE OF ARKANSAS	1,059,100	8.3	970,700
Fayetteville-Springdale SMSA (Benton & Washington Counties)	87,400	4.9	83,100
Fort Smith SMSA (Crawford & Sebastian Counties in Arkansas and LeFlore & Sequoyah Counties in Oklahoma)	93,300	8.6	85,300
Little Rock-North Little Rock SMSA (Pulaski & Saline Counties)	203,300	6.4	190,000
Pine Bluff SMSA (Jefferson County)	38,650	8.8	35,250

County	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	12,250	6.7	11,425	Lee	5,075	13.3	4,400
Ashley	10,675	9.8	9,625	Lincoln	4,100	14.0	3,525
Baxter	10,675	10.8	9,525	Little River	5,925	8.9	5,400
Benton	38,500	5.6	36,350	Logan	7,525	8.0	6,925
Boone	13,875	5.8	13,075	Lonoke	16,650	6.2	15,625
Bradley	4,950	10.1	4,450	Madison	6,575	7.6	6,075
Calhoun	2,775	7.2	2,575	Marion	7,100	6.0	6,675
Carroll	10,325	6.1	9,700	Miller	15,825	7.7	14,600
Chicot	6,650	11.3	5,900	Mississippi	27,300	12.2	23,975
Clark	10,325	6.1	9,700	Monroe	4,750	11.6	4,200
Clay	9,725	11.6	8,600	Montgomery	2,700	12.0	2,375
Cleburne	7,025	8.9	6,400	Nevada	4,125	6.7	3,850
Cleveland	1,925	11.7	1,700	Newton	2,225	12.4	1,950
Columbia	13,725	7.1	12,750	Ouachita	14,175	8.3	13,000
Conway	9,275	25.1	6,950	Perry	3,200	18.8	2,600
Craighead	32,500	6.8	30,275	Phillips	13,525	13.7	11,675
Crawford	17,075	9.1	15,525	Pike	4,075	12.3	3,575
Crittenden	23,750	6.9	22,100	Poinsett	10,800	8.6	9,875
Cross	8,600	8.4	7,875	Polk	5,950	15.1	5,050
Dallas	4,100	6.7	3,825	Pope	19,650	9.0	17,875
Desha	8,475	14.5	7,250	Prairie	4,400	9.1	4,000
Drew	8,425	8.6	7,700	Pulaski	175,125	6.2	164,350
Faulkner	23,625	7.8	21,775	Randolph	7,450	10.7	6,650
Franklin	6,350	7.1	5,900	St. Francis	13,350	11.0	11,875
Fulton	2,975	15.1	2,525	Saline	27,875	8.0	25,650
Garland	30,375	9.4	27,525	Scott	4,025	6.8	3,750
Grant	4,250	11.8	3,750	Searcy	3,300	10.6	2,950
Greene	14,450	12.8	12,600	Sebastian	43,400	7.7	40,050
Hempstead	10,725	6.5	10,025	Sevier	6,850	8.4	6,275
Hot Spring	10,800	12.3	9,475	Sharp	4,625	11.4	4,100
Howard	8,350	5.1	7,925	Stone	3,775	11.9	3,325
Independence	16,475	8.5	15,075	Union	24,200	7.9	22,300
Izard	4,875	9.2	4,425	Van Buren	4,375	12.0	3,850
Jackson	9,975	15.8	8,400	Washington	48,900	4.4	46,750
Jefferson	38,650	8.8	35,250	White	24,200	9.5	21,900
Johnson	9,350	7.0	8,700	Woodruff	4,425	11.3	3,925
Lafayette	3,600	10.4	3,225	Yell	8,275	5.7	8,900
Lawrence	8,875	8.5	8,125				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

LABOR FORCE ESTIMATES
OCTOBER 1984

IN OCTOBER, ARKANSAS' CIVILIAN LABOR FORCE DECREASED BY 500 TO TOTAL 1,059,100. TOTAL EMPLOYMENT DECLINED 5,700 TO TOTAL 970,700. UNEMPLOYMENT ROSE BY 5,200 TO TOTAL 88,400. OF THE 75 COUNTIES, WASHINGTON HAD THE LOWEST UNEMPLOYMENT RATE AT 4.4 PERCENT AND CONWAY, THE HIGHEST AT 25.1 PERCENT. MOREOVER, THE UNEMPLOYMENT RATES IN 47 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. FOR THE SMSAS, FAYETTEVILLE - SPRINGDALE HAD THE LOWEST UNEMPLOYMENT RATE AT 4.9 PERCENT AND PINE BLUFF HAD THE HIGHEST RATE AT 8.8 PERCENT. THE RATES FOR THE LITTLE ROCK-NORTH LITTLE ROCK AND THE FORT SMITH SMSAS WERE 6.4 AND 8.6 PERCENT, RESPECTIVELY.



UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

THE MINERAL INDUSTRY OF ARKANSAS IN 1984

The value of nonfuel mineral production in Arkansas in 1984 increased 13.2% to an estimated $279.0 million. The State was a major producer nationally of abrasives, bauxite, and bromine. Construction minerals, store, and sand and gravel also contributed significantly to the State's economy.

Construction activities, although improved from 1983, remained at a relatively low level resulting in little change in mineral output. The national recession plus imports have severely impacted on output of barite and vanadium with no reported production since 1982.

Although at one time operating at 60% of capacity, two Bromine producers expanded facilities. Ethyl Corp. started up a 160 million pounds per year plant at Magnolia to produce sodium bromide and calcium bromide. Dow Chemical Co. plans to build a calcium bromide plant at Magnolia with a capacity of 120 million pounds per year; construction will begin in 1985 and is scheduled for completion in 1986.

Norton-Alcoa Proppants started its $50 million expansion program at Fort Smith. The expansion when completed in 1985 will triple proppant output to 3 million pounds per year.

Geomex Mine Services Inc. purchased the Coleman quartz mine near Hot Springs Village. Plans are to increase output over the next several years for an expanding international market.

Reynolds Metals Co. shut down three 25,000 tons-per-year potlines at its Jones Mills smelter and permanently closed its Hurricane Creek facility which was limited to chemical products. Early in the year the company reopened its Malvern aluminum cable plant, idle since late 1982.

MacSteel Division of Quanex Crop. completed construction of its $98 million minimill in Fort Smith and went on stream late in 1984 with a capacity of 280,000 tons per year.

TABLE 1.—NONFUEL MINERAL PRODUCTION IN ARKANSAS[1]

Mineral		1983 Quantity	1983 Value (thousands)	1984[p] Quantity	1984[p] Value (thousands)
Clays	thousand short tons	879	$9,956	1,063	$14,674
Gem stones		NA	200	NA	200
Sand and gravel:					
Construction	thousand short tons	[e]6,900	[e]19,600	8,400	25,000
Industrial	do	386	4,796	450	6,000
Stone:					
Crushed	do	13,448	51,267	15,000	56,500
Dimension	do	9	573	--	--
Talc	do	7	66	W	W
Combined value of abrasives, bauxite, bromine, cement, gypsum, lime, tripoli, and value indicated by symbol W		XX	159,972	XX	176,585
Total		XX	246,430	XX	278,959

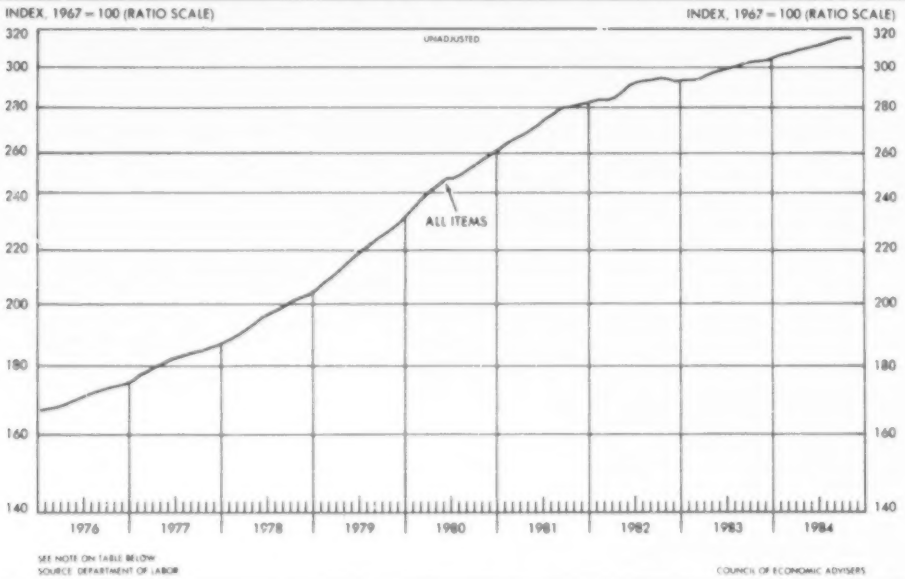
[e]Estimated. [p]Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included in "Combined value" figure. XX Not applicable.

[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

Source: Adapted from *Mineral Industries Surveys*, U.S. Dept. of Interior, released by State Liaison Office, Tuscaloosa, Alabama, January 1985.

CONSUMER PRICES

In November, the consumer price index for all urban consumers rose 0.2 percent seasonally adjusted (it was unchanged not seasonally adjusted). The index was 4.0 percent above its level in November 1983.



SEE NOTE ON TABLE BELOW
SOURCE: DEPARTMENT OF LABOR

COUNCIL OF ECONOMIC ADVISERS

[1967 = 100, except as noted; monthly data seasonally adjusted, except as noted]

Period	All items [1]	Food	Housing					Fuel and other utilities	Apparel and upkeep	Transportation			Medical care	Energy [4]	All items less food, energy, and shelter
			Total [1]	Shelter						Total [1]	New cars	Motor fuel [3]			
	NSA			Total	Renters' costs [2]	Homeowners' costs [2] NSA	Maintenance and repairs NSA								
Rel. imp. [5]	*100.0*	*18.7*	*37.6*	*21.5*	*7.0*	*14.0*	*0.5*	*8.2*	*5.2*	*21.8*	*3.5*	*5.9*	*6.1*	*11.9*	*47.9*
1976	170.5	180.8	174.6	179.0			199.6	182.7	147.6	165.5	135.7	177.9	184.7	189.3	159.9
1977	181.5	192.2	186.5	191.1			214.7	202.2	154.2	177.2	142.9	188.2	202.4	207.3	169.5
1978	195.4	211.4	202.8	210.4			233.0	216.0	159.6	185.5	153.8	196.3	219.4	220.4	179.1
1979	217.4	234.5	227.6	239.7			256.4	239.3	166.6	212.0	166.0	265.6	239.7	275.9	191.5
1980	246.8	254.6	263.3	281.7			285.7	278.6	178.4	249.7	179.3	369.1	265.9	361.1	208.3
1981	272.4	274.6	293.5	314.7			314.4	319.2	186.9	280.0	190.2	410.9	294.5	410.0	228.1
1982	289.1	285.7	314.7	337.0			334.1	350.8	191.8	291.5	197.6	389.4	328.7	416.1	245.6
1983	298.4	291.7	323.1	344.8	103.0	102.5	346.3	370.3	196.5	298.4	202.6	376.4	357.3	419.3	258.4
1983: Nov	303.1	294.1	327.4	350.7	105.0	104.3	353.4	374.4	198.5	305.5	205.3	381.6	364.7	424.5	263.5
Dec	303.5	295.4	328.1	351.8	105.3	104.5	354.7	373.8	198.5	306.1	205.7	379.8	366.0	423.3	264.2
1984: Jan	305.2	300.2	329.6	353.0	105.7	104.9	356.7	378.2	199.0	306.7	205.6	375.9	368.6	421.7	265.8
Feb	306.6	302.2	331.1	353.8	106.0	105.1	353.5	384.8	198.5	306.6	206.4	370.5	371.5	422.7	266.7
Mar	307.2	301.8	331.2	355.3	106.5	105.6	355.3	380.9	198.6	309.4	207.4	374.0	373.5	421.8	267.8
Apr	308.8	301.7	333.3	357.6	107.4	106.2	356.3	383.9	198.5	311.2	207.6	375.4	375.3	424.7	269.1
May	309.7	300.9	334.1	358.7	107.8	106.5	357.3	384.6	198.6	312.7	207.2	376.1	377.3	425.4	270.0
June	310.7	301.3	334.9	360.0	108.2	106.8	358.9	385.4	198.1	312.1	207.3	370.4	379.0	422.6	270.7
July	311.7	302.2	336.7	362.5	108.9	107.6	360.3	388.6	199.0	311.1	208.3	364.0	381.1	421.2	271.6
Aug	313.0	304.1	338.7	364.3	109.5	108.1	360.1	391.7	200.8	311.2	209.4	361.2	382.2	421.8	272.7
Sept	314.5	303.8	340.2	366.1	110.0	108.7	362.7	392.9	202.1	312.7	210.5	365.2	383.4	424.4	273.9
Oct	315.3	304.9	340.5	367.4	110.5	109.1	361.6	389.9	203.2	314.9	210.9	371.6	385.4	425.6	274.8
Nov	315.3	305.6	341.4	368.7	110.9	109.4	352.9	390.7	203.0	315.2	210.3	373.2	387.1	426.5	275.3

[1] Includes items not shown separately.
[2] December 1982 = 100.
[3] Includes direct pricing of diesel and gasohol beginning September 1981.
[4] Fuel oil, coal, and bottled gas, gas (piped) and electricity, and motor fuel. Motor oil, coolant etc. also included through 1982.
[5] Relative importance, December 1983.

NOTE.—NSA indicates data are not seasonally adjusted.
Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.
Data beginning 1983 incorporate a rental equivalence measure for homeownership costs and therefore are not strictly comparable with figures for earlier periods.

SOURCE: Department of Labor, Bureau of Labor Statistics.

CASH RECEIPTS FROM FARM MARKETINGS

Base Year to Date and Quarterly Changes in Cash Receipts, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Arkansas	+ 263.8	+ 0.4	+ 1.1	− 26.1	+ 33.8
United States	+ 245.6	− 10.7	+ 4.5	+ 3.5[R]	+ 6.2

Cash Receipts from Farm Marketings in Arkansas

Seasonally adjusted, thousands of dollars

	1977	1978	1979	1980	1981	1982	1983[R]	1984	Not seasonally adjusted 1984
Quarter									
Jan-Mar	686,105	915,305	931,511	961,705	823,428	868,250	675,728	852,854	721,548
Apr-Jun	703,457	705,441	719,506	658,942	909,757	881,841	638,833	629,973	457,684
Jul-Sep	578,357	760,304	762,307	879,485	1,011,547	800,923	840,884	842,722	670,852
Oct-Dec	500,169	584,144	663,304	570,684	692,029	772,552	843,988		
Annual	2,468,088	2,965,194	3,081,628	3,070,816	3,436,761	3,323,566	2,999,433		

[R] - Revised based on "Farm Income," *Economic Indicators* (December 1984), p. 7.

ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

Base Year to Date and Quarterly Changes in Activity of Arkansas S & L Associations

Not seasonally adjusted, percent (based on CONSTANT DOLLARS), Base year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Total New Loans	+ 271.9	− 5.5	+ 16.6	− 42.1	− 18.2
Net New Savings	+ 336.6	+ 37.1	+ 13.8	− 7.1	− 0.4

Economic Activity of Arkansas Savings and Loan Associations

Not seasonally adjusted, Thousands of dollars

TIME PERIOD	TOTAL NEW LOANS		NET NEW SAVINGS	
	Current $	1967 $	Current $	1967 $
1977	815,800	448,590	405,000	223,492
1978	729,300	373,700	416,900	213,610
1979	625,900	290,560	436,830	204,525
1980	504,700	204,275	287,600	115,580
1981	360,800	132,970	20,000	7,240
1982	677,400	233,370	353,800	121,355
1983	2,370,300	793,540	1,446,300	487,430
1984 Q-I	712,300	232,500	277,000	90,410
Q-II	416,900	134,610	260,100	83,985
Q-III	344,800	110,120	262,000	83,680

WATERBORNE COMMERCE:
McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Base Year to Date and Quarterly Changes in Total and Internal Tonnages

Not seasonally adjusted, percent, Base = Ave. Qtr. 1971

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Total	+ 182.5	− 17.0	+ 25.8	+ 3.7	+ 6.1
Internal	+ 27.4	− 21.1	− 2.9	+ 38.0	+ 15.8

Freight Traffic
Arkansas River Commerce

Not seasonally adjusted, Thousands of short tons

TIME PERIOD	TRAFFIC TONNAGES*			
	Inbound	Outbound	Internal	Total
1977	2,841	2,339	3,463	9,138
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981	1,564	5,684	1,741	9,446
1982	1,520	4,611	1,561	8,258
1983	1,918	3,905	1,904	8,017
1984 Q-I	492	1,062	484	2,341
Q-II	595	1,006	667	2,427
Q-III	602	1,108	773	2,575

*Total tonnage includes "through traffic"—shipments which originate and terminate outside the Arkansas River Commerce Area.

RESIDENTIAL CONSTRUCTION CONTRACTS

Base Year to Date and Quarterly Changes in Residential Construction, Arkansas and United States

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-I[1]	1984 Q-II thru 1984 Q-III
Arkansas	+ 359.7	− 16.1	+ 2.9	+ 29.4	− 11.3
United States	+ 439.1	−15.5	− 0.3	+ 35.0	−11.5

Residential Construction Contracts in Arkansas

Seasonally adjusted, Thousands of dollars

Quarter	1977	1978	1979	1980	1981	1982	1983	1984	Not seasonally adjusted 1984
Jan-Mar	160,861	220,739	205,119	144,050	176,180	115,590	206,450	242,890	215,900
Apr-Jun	173,558	236,915	153,917	137,600	159,750	153,850	240,380	255,210	279,300
Jul-Sep	182,210	227,633	193,364	177,450	138,360	174,250	231,250	228,310	247,700
Oct-Dec	217,222	236,718	154,130	185,450	158,510	204,440	228,180		
Annual	733,851	922,005	706,530	664,550	632,800	648,130	906,260		

NONRESIDENTIAL CONSTRUCTION CONTRACTS

Base Year to Date and Quarterly Changes in Residential Construction, Arkansas and United States

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1984 Q-III	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III
Arkansas	+ 247.1	+ 34.3	− 9.7	+ 3.4	+ 11.4
United States	+ 280.3	− 4.2	− 4.0	+ 25.8	+ 0.3

Nonresidential Construction Contracts in Arkansas

Not seasonally adjusted, Thousands of dollars

	1977	1978	1979	1980	1981	1982	1983	1984
Quarter								
Jan-Mar	57,486	72,851	88,988	72,300	90,500	96,300	69,500	108,500
Apr-Jun	63,726	60,479	109,976	91,200	72,700	54,700	90,900	112,200
Jul-Sep	67,632	90,471	70,296	91,900	59,400	72,000	89,500	125,000
Oct-Dec	76,866	69,041	112,549	99,700	79,500	56,600	120,200	
Annual	265,710	22,842	381,809	355,100	302,100	279,600	370,100	

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Arkansas Business and Economic Review

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2. Regional and industrial problems that have implications for the Arkansas economic community;
3. National business and economic issues of general interest to the people of Arkansas; and
4. Business and economic theory.

As a minimum, to be accepted for publication a manuscript must have literary value and the research upon which it is premised must have been conducted in a scientifically valid manner. Thereafter, the order of enumeration of the subject areas designates the system of priorities that will be applied in ascertaining the publishability of a manuscript. However, the system of priorities will not be applied in such a way as to completely exclude any of the four categories of articles.

Manuscripts should be submitted in triplicate and should be double spaced with each chart or graph prepared in ink (camera ready) on a separate sheet. Manuscripts and all inquiries should be addressed to Editor, *Arkansas Business and Economic Review*, Bureau of Business and Economic Research, College of Business Administration, University of Arkansas, Fayetteville, Arkansas 72701 (Telephone 501-575-4151).

PERCEPTIONS OF ARKANSAS AS A MANUFACTURING LOCATION

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INTRODUCTION

In mid 1984, as a part of a broader study, approximately the top 10 percent of Arkansas Power and Light Company's (AP & L) industrial customers were surveyed to determine their current (1984) production levels, the outlook for their establishments for the period 1985 to 1990, and their opinions of Arkansas as a manufacturing location (Table 1). Of the 181 establishments contacted, approximately 95 provided data that could be included in this portion of the study. The responding firms were distributed across twelve Standard Industrial Classification (SIC) groups. The following narrative summarizes the responses received and the resulting conclusions.

CURRENT ECONOMIC CONDITIONS AMONG, AND OUTLOOK FOR, ARKANSAS MANUFACTURING ESTABLISHMENTS

Almost 85 percent of the responding establishments operated at production levels of 61 percent or more of capacity in 1983, and approximately 48 percent of the respondents were producing at 81 percent or more of capacity in that year.

With respect to 1984 operations, 66 percent were at normal operating levels and over 63 percent of those expected a continuation of this condition in the near term. Almost 24 percent of the group, however, expected an upturn. About 23 percent of the responding establishments were operating at below normal levels in 1984, but one-half of that group expected an upturn in the near term. Of the 11 percent operating at above normal levels, 60 percent expected a continuation of current conditions and 20 percent expected an upturn. Overall, only seven responding establishments expected a near-term decline from 1984 operating levels.

With respect to long-term outlook (1985-1990), approximately 42 percent of the establishments expected expansion and 39 percent a continuation of current levels of production. Over 12 percent, however, expected cutbacks at their facility.

When asked if their company should decide to expand its capacity, whether that expansion is likely to be in Arkansas, over two thirds (68.6 percent) of the respondents said yes. Of that group, over 83 percent believe expansion would be in the form of an increased investment at the responding establishment.

COMMENTS CONCERNING ARKANSAS AS A MANUFACTURING LOCATION

Firms were also asked to comment on 1) what factors determined their belief that any expansion in capacity would or would not take place in Arkansas; 2) the three most positive aspects (if any) of their plant's location in Arkansas; and 3) the three most negative aspects (if any) of their plant's location in Arkansas.

The responses frequently included multiple comments and, as should be expected, the comments of some firms are in direct opposition to those of others. However, at least some patterns, based upon frequency of the comments, do emerge. In the following sections, the respondents' comments are grouped and then summarized.

Factors Determining Future Location Decisions

Labor. The supply of available labor or some factor related to the workforce was mentioned **positively** twenty-two times. While the labor supply accounted for twelve comments (from seven SIC groups), other positive comments included wage rates, worker attitude, right-to-work law, expertise (skills), quality of labor, and favorable labor/management relations. Negatively, some aspect of the workforce was listed four times. Those things seen as negative location determinants were increasing labor costs, the presence of unions, and people skills.

Raw Materials. Exclusive of energy, raw materials were mentioned seventeen times. The availability of raw materials was mentioned positively in twelve responses, primarily in SIC 20 and 24. Negatively, insufficient raw materials, either timber or oil, were denoted four times and lack of water was listed by one establishment.

Energy. Either energy or utilities were mentioned fifteen times, twelve of which were negative. The instability and/or uncertainty of costs were noted, as well as the level, as considerations that would prohibit expansion occurring in Arkansas. On the positive side, energy cost was mentioned twice and energy availability was mentioned once.

Geography. Factors related to the market area and transportation were listed in twenty-eight instances, with eighteen of those being favorable to an Arkansas location. Comments concerning geography in a positive vein included area served, local business, Sunbelt location, proximity to related inter-company activities, and access to corporate management. Negative considerations mentioned were distribution channels, freight and distribution costs, better service to the market from another location, proximity of major customers, and distance from home office.

Present Facility. The condition, or fact of existence, of the facility surveyed was listed as a consideration in twenty-one instances, all but one being positive. For the most part, the positive answers could be summarized as "the present facility is here."

Other Factors. A mixture of other comments was provided on the returned questionnaires. Among them were positive factors concerning legislative climate, environmental agency attitude, financial incentives, the attitude of state government and local citizens toward industry, an attractive tax climate, and cost of operations. Negatively, the following factors were among those listed: high production costs, corporate tax rates, educational facilities, tax burden, and economic conditions in Arkansas.

Summary. Based on the frequency of comments, the strongest favorable factors for industrial expansion center upon Arkansas' central location, both the quantity and work ethic of its labor force, the availability of timber, and the fact that facilities presently exist here and are viewed as expandable. Generally viewed as negative determinates were: dwindling or inadequate timber and oil resources; increasing labor and production costs; and high, uncertain, and unstable energy (or utility) costs.

Overall, the positive comments outnumbered the negative ones by about 2 to 1.

Positive Aspects of Arkansas Locations

Labor. This factor was listed, in one form or other, by all responding SIC groups for a total of seventy-nine times. The availability of labor accounted for about one-half of the list. This was followed by labor costs (wages), the work ethic, and the right-to-work law. Also mentioned (either once or twice in each instance) were labor relations, quality of labor, lack of turnover, and little union activity.

Raw Materials. The availability of timber was mentioned by sixteen establishments in SIC groups 24 and 26. In addition, the availability of raw materials, or natural resources in general, was stated in several instances. Specific mention was also made of water supply (twice), oil and gas (twice), and land.

Energy. Competitive utilities and the availability of utilities were mentioned by three firms. Four other firms cited low energy costs as an advantage of an Arkansas location.

Geography. In one manner or other, thirty-siven responses indicated location (geography) as an advantage. Twenty-one responses across most SIC groups pointed to Arkansas as a central location. Another eleven denoted location, Sunbelt product distribution, market, proximity to customers, or some similar descriptor.

Transportation. Nearness to a freight centroid was listed by three firms, while seven others mentioned transportation in general. Two respondents, in SIC 20, commented on highway access, another in that SIC listed low freight rates as a result of river transportation, and one other mentioned location relative to the rail industry. One respondent (SIC 24) listed the availability of port facilities.

Weather. Several (eleven) respondents, from seven SIC's, listed Arkansas weather as an advantage.

Operating Costs. Competitive costs, construction costs, operating costs, occupancy costs, and favorable overhead were each mentioned as an advantage by a responding establishment.

Taxes. This factor was mentioned in several differing forms. Answers of eleven respondents could be categorized as "low taxes," Property taxes and a good tax structure were each listed by a respondent.

Other. The remaining responses centered upon state government and local leadership. At the state level, regulatory climate, environmental attitude, cooperation, and the Arkansas Industrial Development Commission were cited. As local factors, good schools were mentioned once, community leadership was listed six times; while industrial climate was mentioned twice and industrial financing was mentioned three times. The state's environment and quality of life were noted in a total of seven responses.

Summary. The most frequently mentioned advantages were: 1) availability of labor; 2) the work ethic; 3) proximity to markets (central location); and 4) availability of resources. Low taxes, weather, environment, and quality of life were also listed by several respondents.

Negative Aspects of Arkansas Locations

More so than the list of advantages, there was a substantial diversity among the items listed as a disadvantage to an Arkansas location. Thus, it is somewhat more difficult to generalize, or group, the disadvantages.

Labor. The lack of skilled or educated labor was listed by twenty-four respondents. In addition, two responses mentioned a lack of available management personnel, with one of them specifically stating difficulty in "recruiting management personnel." Single responses included the quantity of labor, militant labor, union activity, and wage rates. Three

firms noted the State's Workmen Compensation law, and two said labor cost increases were a disadvantage. One respondent simply listed "the labor market."

Raw Materials. Nine respondents mentioned raw materials. Of that number, two specified timber and two others referred to the supply of crude oil.

Energy. This was the most frequently mentioned factor in that statements concerning energy or utilities appeared forty-three times. Almost two-thirds of the statements related to the cost of energy. The **uncertainty** of future costs was listed eight times, whereas the rising cost was mentioned seven times. The respondents mentioning this factor were from virtually all SIC groups.

Geography. The distance from customers, vendors, or repair facilities was noted in the responses in a total of eight instances.

Transportation. Inadequate or inferior transportation, in general terms, was listed six times. In addition, highways were mentioned by four respondents; air transportation by four; and rail service (or rates) by five. Increased costs, poor routes, and traveler logistics also appeared as disadvantages.

Taxes. Increasing state and local taxes and truck weight taxes were each mentioned by a firm. Two others listed high taxes and another noted there was no tax incentive to expand.

Government. Some aspect of either local or state government, excluding education, was mentioned sixteen times, with about one-third of the responses referring to local governments. Among the sixteen, highway regulations were noted three times, environmental controls (or costs) five times and the unavailability or uncertainty of financing, twice.

Education. The quality or lack of vocational-technical education facilities (programs) were listed as a disadvantage by four firms. A greater number of responses noted inadequate education facilities or programs (a total of eight).

Other. The remainder of the items listed included 1) poor access to cultural events/entertainment; 2) lack of technical support, 3) ACORN; 4) high chemical costs; 5) number of competitors; 6) weather; 7) health care costs; 8) lack of some services or commodities; 9) lack of international banking facilities; etc. Each of these was mentioned once, except that item (8) was listed twice.

Summary. Energy (or utilities) was the most frequently mentioned disadvantage from the standpoint of the continued increasing level and uncertainty of costs. This factor was noted both from the standpoint of level and uncertainty of cost. The lack of skilled labor or some aspect of the workforce was mentioned almost as frequently as energy. This was followed by transportation difficulties, government (state and local) and education (technical and general).

CONCLUSIONS

The quantity of the labor, along with the prevailing work ethic, is probably the most noteworthy of Arkansas' industrial location advantages. This is tempered, somewhat, by the lack of skilled (technical) employees and what is perceived as inadequate vocational-technical training facilities.

Raw materials, weather, and the environment are also considered to be advantages; but while SIC's 20 and 24 view raw materials positively, the supply is seen as dwindling among the firms in some sectors.

Electric energy cost, as well as that of some other utilities, is viewed as a negative factor among a large proportion of the establishments. However, comments would seem to indicate that cost **increases** and **uncertainty** are of almost equal significance to the actual **level** of costs. Some firms do view electric energy

costs, and availability, as an advantage of an Arkansas location.

The central location of Arkansas, or its proximity to markets, is a frequently mentioned advantage. The absence of adequate transportation (rail, air and, in some instances, highway) reduces this advantage, however. Similarly, an Arkansas location can be viewed as a disadvantage with respect to maintenance, customers, etc.

Government in Arkansas, both local and State, is neither clearly an advantage nor a disadvantage. This is inclusive of regulations and taxes.

The above factors would seem to support the 1985-1990 expectations of the responding firms. Almost 70 percent of the respondents said that, if their company expanded, it was likely to be in Arkansas. Moreover, 80 percent of this group felt that any expansion would be at the existing facility. Finally, without regard to expansion of facilities, 81 percent of all respondents felt production levels would either stay constant or expand in the near term.

Overall, firms located in Arkansas seem to find it an advantageous location. The state does have shortcomings as an industrial location but some of the more frequently cited ones (lack of skilled or educated labor, uncertainty of future energy costs, inadequate transportation, etc.) can be rectified. Others, such as geography and a declining supply of natural resources, may be of equal significance but are concentrated in fewer SIC groups and point to the need to concentrate economic development efforts in a selected set of SIC groups.

TABLE I
Business Conditions and Expansion Potential
Summary of Responses by SIC

	SIC									
	20	22	24	25	26	27	28	29	30	31
1. 1983 production level was what percentage of your normal operating capacity?										
1. [ ] 1-20%	-	-	-	-	-	-	-	-	-	-
2. [ ] 21-40%	-	-	-	-	-	-	1	-	-	-
3. [ ] 41-60%	2	1	2	-	-	-	1	-	1	-
4. [ ] 61-80%	6	1	4	1	-	2	1	2	1	2
5. [ ] 81-100%	7	1	10	2	5	-	1	2	3	1
2. Describe the current and near term (1984) conditions at this facility.										
a. Currently at Normal Operating Levels	8	1	12	2	5	2	3	3	4	2
1. [ ] Should Continue	3	1	9	1	4	1	3	3	3	1
2. [ ] Expect Decline	-	-	3	1	-	-	-	-	1	-
3. [ ] Expect Upturn	5	-	-	-	1	1	-	-	-	-
4. [ ] Do Not Know	-	-	-	-	-	-	-	-	-	1
b. Currently Below Normal	4	1	3	-	-	-	1	1	1	1
1. [ ] Should Continue	-	-	2	-	-	-	-	1	1	1
2. [ ] Expect Further Decline	-	-	-	-	-	-	-	-	-	-
3. [ ] Expect Upturn	4	-	1	-	-	-	1	-	-	-
4. [ ] Do Not Know	-	1	-	-	-	-	-	-	-	-
c. Currently Above Normal	3	1	-	1	-	-	-	-	1	-
1. [ ] Should Continue	1	1	-	1	-	-	-	-	1	-
2. [ ] Expect Decline	-	-	-	-	-	-	-	-	-	-
3. [ ] Expect Further Upturn	2	-	-	-	-	-	-	-	-	-
4. [ ] Do Not Know	-	-	-	-	-	-	-	-	-	-
3. What is the long-term (1985-1990 or five year plan) outlook for this facility?										
a. [ ] Favorable business conditions will probably cause expansion.	8	1	3	2	-	1	2	2	2	-
b. [ ] Favorable business conditions will prompt a move to a larger facility.	1	-	-	-	-	-	-	-	1	-
c. [ ] Unfavorable business conditions will probably force cutbacks.	1	1	2	-	-	-	1	1	1	2
d. [ ] Unfavorable business conditions will probably force closing.	-	-	-	-	-	-	-	-	-	-
e. [ ] Neither expansion nor cutbacks are anticipated.	5	1	9	1	5	1	1	1	1	1
f. [ ] Other	-	-	2	-	-	-	-	-	1	-
4. If your company should decide to expand its capacity, do you believe that expansion is likely to take place in Arkansas?										
[ ] Yes	11	1	12	2	-	2	3	2	1	1
[ ] No	2	2	3	1	3	-	1	1	4	2
5. If your answer to question 4 was *yes*, do you believe that expanded capacity is likely to be in the form of										
a. [ ] an increase in the investment in this facility.	9	1	10	-	-	2	2	2	2	-
b. [ ] the construction of a new facility at another site.	1	-	1	1	-	-	-	-	-	-
c. [ ] both (a) and (b) above.	1	-	1	-	-	-	1	-	-	-

TABLE I (Continued)

	SIC							Total	
	32	33	34	35	36	37	39	Number	%
1. 1983 production level was what percentage of your normal operating capacity?									
1. [ ] 1-20%	-	-	-	-	-	-	-	-	-
2. [ ] 21-40%	-	-	-	1	-	1	-	3	3.19
3. [ ] 41-60%	-	1	3	-	1	1	-	13	13.83
4. [ ] 61-80%	2	4	2	3	2	1	1	35	37.23
5. [ ] 81-100%	1	1	2	1	3	1	2	43	47.74
2. Describe the current and near term (1984) conditions at this facility.									
a. Currently at Normal Operating Levels	2	3	7	2	2	3	2	63	66.32
1. [ ] Should Continue	2	2	1	2	2	1	1	40	63.49
2. [ ] Expect Decline	-	-	-	-	-	-	-	5	7.94
3. [ ] Expect Upturn	-	1	4	-	-	2	1	15	23.81
4. [ ] Do Not Know	-	-	2	-	-	-	-	3	4.76
b. Currently Below Normal	1	2	1	3	1	1	1	22	23.16
1. [ ] Should Continue	1	-	1	1	1	-	-	9	40.91
2. [ ] Expect Further Decline	-	1	-	-	-	-	-	1	4.54
3. [ ] Expect Upturn	-	1	-	2	-	1	1	11	50.00
4. [ ] Do Not Know	-	-	-	-	-	-	-	1	4.54
c. Currently Above Normal	-	1	-	-	3	-	-	10	10.53
1. [ ] Should Continue	-	-	-	-	2	-	-	6	60.00
2. [ ] Expect Decline	-	1	-	-	-	-	-	1	10.00
3. [ ] Expect Further Upturn	-	-	-	-	-	-	-	2	20.00
4. [ ] Do Not Know	-	-	-	-	1	-	-	1	10.00
3. What is the long-term (1985-1990 or five year plan) outlook for this facility?									
a. [ ] Favorable business conditions will probably cause expansion.	1	3	6	4	1	2	2	40	41.67
b. [ ] Favorable business conditions will prompt a move to a larger facility.	-	-	-	-	1	-	-	3	3.12
c. [ ] Unfavorable business conditions will probably force cutbacks.	1	1	-	-	1	-	-	12	12.50
d. [ ] Unfavorable business conditions will probably force closing.	-	-	-	-	-	-	-	-	0.00
e. [ ] Neither expansion nor cutbacks are anticipated.	1	2	2	1	3	1	1	37	38.54
f. [ ] Other	-	-	-	-	-	1	-	4	4.17
4. If your company should decide to expand its capacity, do you believe that expansion is likely to take place in Arkansas?									
[ ] Yes	1	4	7	4	2	3	3	59	68.60
[ ] No	2	1	1	-	4	-	-	27	31.40
5. If your answer to question 4 was *yes*, do you believe that expanded capacity is likely to be in the form of									
a. [ ] an increase in the investment in this facility.	1	3	8	3	2	3	2	50	83.33
b. [ ] the construction of a new facility at another site.	-	-	-	-	-	-	-	3	5.00
c. [ ] both (a) and (b) above.	-	1	-	1	1	-	1	7	11.67

A MULTISTATE COMPARISON OF NONMETROPOLITAN MIGRATION GROWTH

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INTRODUCTION

Over the past decade, several counties across the nation have increased in population, and for many this has represented a net-migration turnaround reversing the historical experience in these areas over the preceding several decades.

Beginning in the mid-1970s, a number of articles appeared in the literature documenting this turnaround. The early articles looked at the changes which first occurred around 1970. The changes were popularized by Beale[1], and Fuguitt[2] and were advanced by Debertin and Bradford[3] and Kale[4].

Most of these studies have arrived at the same conclusion—that the nonmetropolitan counties grew at a rate exceeding that of the metropolitan counties throughout the decade. Over the 1970-80 period, total metropolitan growth averaged 1.0 percent annually, while nonmetropolitan growth averaged 1.4 percent. This compares with a 1.8 percent increase in the metropolitan areas in the sixties and a 0.2 percent decrease in the nonmetropolitan areas over that period[5].

The change occurred not only in the counties adjacent to the metropolitan regions, but also in remote areas of the country, and while growth figures were not always large in absolute amounts, the changes were often dramatic in percentage terms.

Several reasons for the change have been put forward; Fitzsimmons et al.[6] found that the patterns of employment growth in the nonmetropolitan areas appeared to be driven by growth in basic industry. This finding differs from the popular notion that nonmetropolitan growth is basically due to people following jobs into an area, and not the reverse.

Others have focused upon a combination of forces which may have contributed to a fundamental breakdown of the old economic order. Lichter and Fuguitt[7] and also Heaton and Fuguitt[8] insist that the traditional economic variables associated with migration growth are of diminished importance in recent years, and that other factors such as improved transportation and communication as well as the decentralization of industrial and government activities have played a greater role in the growth of the nonmetropolitan areas. This, they state, has allowed for resettlement based more upon quality-of-life considerations.

Chalmers and Greenwood[9] have tied this "demetropolitanization" to the movement of economic activity in general away from the older established areas of the Northeast to the Sunbelt regions of the country. They cite a series of cumulative forces over time that have come together to reduce the advantages of location within the metropolitan regions and, in turn, to permit increased activity in more remote areas. They foresee a continuation of this trend into the eighties as rate differentials for labor force participation narrow allowing for increased employment redistribution as well as population redistribution. This later finding has been confirmed by Wardwell and Gilchrist[10] who used Continuous Work History Sample data to

show increased movement of workers away from the large SMSAs and into smaller, less populated areas. Their results also attributed the change to decreased nonmetropolitan outmovement as well as to increased metropolitan outmovement of population.

Finally, Serow[11] has analyzed annual interstate flows in population to and from nonmetropolitan portions of the nation. By dividing the nation into four regions, his results indicate that the Southern region has benefited the most from the trend towards demetropolitanization. He found some other areas with positive inflows during the seventies; however, the flow was consistently greater than zero only in the South.

All of these studies have contributed to a growing amount of literature on the topic of reverse migration; however, the variation in the amounts of migratory flows to particular counties and over particular periods of time often mask what may be underlying forces which can be applied to the phenomena in general. As a result, it is of significant interest to continue research into the demetropolitanization, and to contrast traditional theories with the realities of the ongoing population changes.

With this in mind, this study was undertaken to focus on the migration patterns within nonmetropolitan counties in four states from different parts of the Midwest (U.S.), in order to determine if a different set of variables was statistically associated with the change in migration within each of these areas.

BACKGROUND TO THE STUDY

The states involved in this study were Arkansas, Minnesota, Nebraska and Oklahoma. The analysis was initiated using discriminant function analysis in order to measure the success with which the variables actually discriminate. Multiple regression analysis was next used to measure the degree of association between the independent variables and the change in net-migration levels that transpired between 1970 and 1980.

The four states were selected solely on the basis of their location in the central portion of the U.S. They are associated with neither the older manufacturing-based society of the East and Northeast nor with the emerging Sunbelt economy of the Southeast and Southwest. None have major ties to foreign export markets, and they do not lie along the coastal waterways. As such, they possess somewhat similar economic environments; yet they are quite different in terms of climate and geography. The nonmetropolitan counties in each state, and the number which gained and lost population through migration during the 70s are presented in Table 1.

The table clearly indicates that the gains through migration were not equally distributed among the states. In Arkansas and Oklahoma, the number of counties which experienced positive gains exceeded those which lost, while in Nebraska and Minnesota the reverse was true. Yet, overall, 56 percent of these rural counties did

TABLE 1
Counties and Changes in Net Migration Rates 1970-80

State	# of Nonmetropolitan Counties	Positive Net-Migration	Negative Net-Migration
Arkansas	65	48	17
Minnesota	71	33	38
Nebraska	89	25	64
Oklahoma	63	54	9

Source: Current Population Reports P-25 Series. U.S. Bureau of the Census, Washington, D.C.

undergo positive migration change during this ten year period.

A geographic glance immediately uncovers where the growth occurred in each state. Essentially, all counties in Arkansas grew except for those which border the Mississippi delta. The Minnesota counties which did not grow were generally confined to the southwest and southern tier of counties along the South Dakota and Iowa borders. Nebraska counties generally lost population through outmigration except for those along Interstate Route 80, and a few selected others across the state. In Oklahoma, only parts of its panhandle and some of the southwestern counties did not grow through migration.

The independent variables which enter into the analysis are presented in Table 2. The fifteen selected variables are designed to cover the major economic and noneconomic factors most often associated with growth phenomena and utilized in past studies. They include location, agglomeration, income, employment, recreation, health, education and demographic variables.

DISCRIMINANT ANALYSIS

For purposes of carrying out the discriminant analysis, the counties in each state were grouped into two categories based upon whether each gained or lost population through net-migration during the 70s. Thus, only one discriminant function was obtained for each state. The discriminant analysis procedure, which is discussed in Bennett and in Nie, et al., reduces the number of variables in a way which maximizes the distances between the two groups on the basis of the variables.[12] It is customarily assumed that the discriminant function scores for each group are normally distributed with equal variances.

The discriminant functions are judged to be significant based upon their eigenvalues and upon the chi-square test of significance on the Wilks' lambda. These values are presented in Table 3. The Wilks' lambda measures the discriminating power in the variables unaccounted for by the already existing functions. Thus, if lambda is large, the less the information that remains to be considered. The Wilks' lambda coefficients are significant on the functions for all of the four states in this analysis, and the eigenvalues are greater than one for all but Nebraska. Thus the discriminant functions can be judged significant in each, but the data are least supportable in Nebraska.

TABLE 2
Independent Variables – Abbreviations

1. Distance to nearest Interstate Highway Interchange	INT
2. Percent of population over age 65, 1970	AGE
3. Median Education level in County, 1970	EDU
4. Percent of labor force employed by Government, 1970	GVT
5. Percent of labor force employed by Manufacturing, 1970	MFG
6. Median Income level in County, 1969	INC
7. Average Value/Acre of Land, 1969	LAN
8. Per Capita Expenditures for Parks & Recreation, 1970	REC
9. Percent of Female Population in the labor force, 1970	FEM
10. Number of Hospital Beds in County, 1970	HBD
11. Median Home Value of County Residences, 1970	HMV
12. Percent Change in Unemployment Rates, 1970-80	UNP
13. Amount of Local Educational Expenses/capita, 1970	LEC
14. Adjacent to SMSA, 1970	MET
15. Population Density, 1970	DEN

TABLE 3
Summary of Discriminant Analysis

State		Variable	Discriminant Function Score
Arkansas			
Eigenvalue:	1.3182	Percent of population over age 65	.564
Wilks' Lambda:	.4314	Median income level in county	1.130
Chi-square:	49.606	Average value/acre of land	-.597
		Percent change in unemployment 1970-80	.290
		Per capita local education expenses	-.605
		Median education level in county	-.485
		Percent of laborforce employed by gov't	.428
		Adjacent to SMSA	-.334
Minnesota			
Eigenvalue:	1.3979	Percent of population over age 65	.677
Wilks' Lambda:	.4170	Percent of laborforce employed by gov't	.616
Chi-square:	55.536	Percent of laborforce employed by manufacturing	.540
		Median income level in county	-.674
		Average value/acre of land	-.517
		Percent of female population in the laborforce	.366
		Number of hospital beds in county	.289
		Median home value of county residences	1.474
		Per capita local education expenses	.490
		Adjacent to SMSA	.409
		Per capita expenditures for parks & recreation	-.340
Nebraska			
Eigenvalue:	.2911	Distance to nearest interstate highway	-.336
Wilks' Lambda:	.7745	Amount of population over age 65	.422
Chi-square:	21.464	Median education level in county	-.293
		Number of hospital beds in county	-.302
		Median home value of county residences	1.094
		Percent change in unemployment 1970-80	-.516
Oklahoma			
Eigenvalue:	1.5010	Distance to nearest interstate highway	-.521
Wilks' Lambda:	.3998	Percent of population over age 65	.492
Chi-square:	51.792	Percent of laborforce employed by gov't	.358
		Percent of female population in the laborforce	-.264
		Number of hospital beds in county	.256
		Per capita local education expenses	.955
		Median education level in county	-.671
		Median income level in county	.572
		Population density	.524

Source: SPSS Discriminant Analysis Program

The standardized discriminant function coefficients represent the relative contribution of each variable to the discriminant function; they are influential in naming the function and in determining the basis on which the function discriminates. The functions for Nebraska and Minnesota are similar. Each possesses, as the key discriminant variable, a large coefficient for the median home value of county residences in 1970. This indicates that counties with relatively high home values at the beginning of the period were most likely to be in the inmigration group in these states, while those places with lower home values would not likely have gained through migration. Thus areas which already were undergoing some growth and experiencing an increase in housing prices were the ones most likely to continue to grow.

In Oklahoma, the function discriminates essentially on the amount of local education expenses per capita spent in the county in 1970. The larger these expenditures were, the greater was the likelihood of growth through migration. The coefficient on this variable was .955. It seems that a potential inmigrant considered a county's commitment to its schools and educational system before moving into the area.

In Arkansas, the median income level in the county had a high score of 1.130. This indicates that it was the wealthier counties which were attracting migrants. This fits the data well since the poorer southeastern counties were the only ones which did not show growth.

Finally, the discriminant analysis procedure was also useful in testing the validity of the classification of counties within each group. Classification is based upon the pooled-within groups covariance matrix and the centroids for discriminating variables. This analysis classified counties based upon the proportional size of the groups. Therefore, a county was assigned to a group on the basis of where it had the greatest probability of belonging, but with the likelihood of being assigned to a larger rather than a smaller group. The process showed that the counties were correctly classified in most instances, indicating the discriminant procedure was able to analyze the areas successfully. The results were as follows: Arkansas, 92 percent correct; Minnesota, 90 percent correct; Nebraska, 79 percent correct; and Oklahoma, 98 percent correct. A county which is correctly classified means that if it grew, and was classified with all the other counties which grew, it exhibited the same type of activity typical of the growth counties as analyzed by the discriminant procedure.

MULTIPLE REGRESSION ANALYSIS

The next statistical technique utilized in the study was the stepwise regression procedure, which attempted to explain the changes in county inmigration in the states during the 1970-1980 period.

The regression results for each of the states are summarized in Table 4, and indicate the variables which were significant at an alpha level of 0.05. The number and type of variables entered into each equation differed by state; however, three variables were common to the Nebraska, Arkansas and Minnesota equations. These were the percent of population over age 65, the average value of an acre of land in the counties and the median home values of county residences. Meanwhile, the Oklahoma equation was significantly different from the other three.

In Arkansas, four variables were significant in the regression equation. Table 5 presents a list of those variables which were and were not significant for Arkansas. The first of the significant variables was the percentage of population over age 65 in the county. Its positive coefficient signifies that a large retired population moving into these counties was most

TABLE 4
Regression Equations

Arkansas	Y'_a =	−40.6483 +	2.515AGE +	.005HMV −	.096LAN −	.041HBD
N = 65			(.591)	(.001)	(.021)	(.019)
R^2 = .68						
Minnesota	Y'_m =	−76.5512 −	.034LAN +	.003HMV +	2.422AGE +	.785GVT + 5.246MET
N = 71			(.011)	(.001)	(.412)	(.184) (1.670)
R^2 = .55						
Nebraska	Y'_n =	−31.4268 +	.010LAN +	1.010AGE +	.001HMV	
N = 89			(.008)	(.262)	(.000)	
R^2 = .23						
Oklahoma	Y'_o =	44.8689 −	3.739EDU −	.118INT +	.069LEC	
N = 63			(1.217)	(.044)	(.029)	
R^2 = .27						

Source: SPSS Multiple Regression Program

highly correlated with the growth of these counties. The second variable was the median home value of county residences, which had a small positive coefficient, and the third variable was the average value per acre of land, which had a small negative coefficient. Together, these last two variables suggested that the areas which were the recipients of inmigrants were those with above average home values (i.e. upper and middle income regions), but which also had not suffered from increased inflation on agricultural land prior to 1970. Thus many areas which grew were still rural in nature, but were wealthier than the average nonmetropolitan county.

The final variable was the number of hospital beds in the county, and its sign was negative. This might imply that hospital facilities are not important, but it does not say whether there might be a hospital present in an adjacent metropolitan county which would instead be able to provide services.

The R^2 of .68 for Arkansas was the highest among the four states studied. This value for R^2 indicated that 68 percent of the variation in inmigration is explained by the variables in the model.

The Minnesota equation was similar to the Arkansas equation since age, median

TABLE 5
Variables Explaining Migration Patterns in Arkansas Counties 1970-80

Significant

Percent of population over age 65, 1970
Median Home Value of County Residences, 1970
Average Value/Acre of Land, 1969
Number of Hospital Beds in County, 1970

Not Significant

Distance to nearest Interstate Highway Interchange
Median Education Level in County, 1970
Percent of labor force employed by Government, 1970
Percent of labor force employed by Manufacturing, 1970
Median Income level in County, 1969
Per Capita Expenditures for Parks & Recreation, 1970
Percent of Female Population in the labor force, 1970
Percent Change in Unemployment Rates, 1970-80
Amount of Local Educational Expenses/capita, 1970
Adjacent to SMSA, 1970
Population Density, 1970

home value and average land value were the first three variables entered, and each possessed the same sign as in the Arkansas model.

The fourth variable significant in this equation was the percent of the local labor force employed by all levels of government. Its positive coefficient suggests a relatively important government sector in these counties and an attendant increase in migrant populations.

The remaining variable (Adjacent to a Metropolitan Statistical Area) had a positive sign. Therefore, the metropolitan adjacent, wealthy and older age (demographically) counties in Minnesota attracted most of the new migrants.

In Nebraska, the value of land per acre was the first variable entered, just as in Minnesota, but its sign was positive instead of negative. The age and home value variables were the next variables entered, and their signs were both positive.

The positive coefficient on the land variable indicated that unlike Arkansas and Minnesota, the typical county that grew through inmigration in Nebraska was already undergoing land price inflation by this time. Most of the counties attracting new migrants were scattered throughout the state along Interstate 80 and not just those near Lincoln and Omaha. Since the interstate was generally completed by 1970, some of the growth in the counties and the change in land values may also have occurred by that time.

In the analysis thus far, the three states showed largely similar patterns in their growth through migration. The major difference in the comparison becomes apparent only when Oklahoma counties are brought into the analysis.

In the Oklahoma equation, only three variables were significant, and none were the same variables as in the other three states. Possible reasoning behind this may lie with the fact that 54 of 63 counties in nonmetropolitan Oklahoma grew through migration; thus, there is little basis to distinguish between growing and nongrowing counties.

The first variable entered in the stepwise process was the median education level in the county, and it possessed a negative coefficient indicating that the growing counties had low levels of education among its adult population.

The distance to the nearest interstate highway interchange was the second variable selected, and its negative coefficient meant that the nearer the interstate was to the county, the more likely the county grew through inmigration.

The final variable entered was the amount of local per capita expenditures for education in the county. It had a positive sign, indicating that a growing county spending more per capita for education in 1970 was attracting migrants, yet the same county may have had a low level of education to begin with. It seems, therefore, that the level of spending associated with education in 1970 was possibly increasing in many counties which up to that time had not spent much money in this area. It appears also that the history of county educational expenditures was of little concern to new migrants who, instead, looked at current spending patterns.

CONCLUSIONS

It is possible that the counties which grew through inmigration form a special group that was confirmed through the discriminant procedure. In Nebraska and Minnesota, the median home value formed the basis for the discriminant function, and this was significant in their respective regression equations. In Oklahoma, the local educational expenditure per capita was a key variable in both analyses. Only in Arkansas were the results of the discriminant analysis not confirmed by the regression procedure. Here the median in-

come level in the county was the key discriminant variable but it did not appear significant in the regression equation.

The results presented in this paper represent fundamental relationships explaining the growth within the nonmetropolitan counties for these four midwestern states. The discriminant procedure permitted the distinction between the growing and nongrowing regions.

Since home values, land values and the percentage of the population over 65 were most important in explaining the inflow of new inmigrants in Minnesota, Nebraska and Arkansas, there appeared to be little support for the idea that either the physical climate of the region or the efforts of local government had much influence over the turnaround in the growth of these counties except in Minnesota where a higher percentage of the workforce employed by government was also significant.

In Oklahoma, where the levels of local educational expenditures and the placement of the interstate highways were important, it appeared that policy matters are of some significance. However, this conclusion must be tempered by the condition that a large number of counties grew in Oklahoma while only a very small number of counties did not grow.

The question of urban sprawl and spillover of population into rural counties also bears addressing. In many states there is a continuing movement of residents from the central city to the suburbs as well as the tendency for strictly rural regions to attract new residents. The discriminant procedure did indicate that this was true for counties in Arkansas and in Minnesota. However this was not confirmed for Nebraska and Oklahoma.

Thus, the general conclusions are that the potential for nonmetropolitan growth through migration in these states was likely to be greatest in counties already experiencing some overall measure of change in the variables prior to 1970. It was the counties which had already undergone increased home values by 1970 that attracted most of the migrants, and in Oklahoma it was those which were beginning to upgrade their educational levels by that time.

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[1]U.S. Department of Agriculture, Economic Research Service, *The Revival of Population Growth in Nonmetropolitan America* by Calvin L. Beale, ERS-605 (Washington, D.C.: Government Printing Office, 1975), pp. 3-15. See also: Beale, "A Further Look at Non-metropolitan Population Growth Since 1970," *American Journal of Agricultural Economics* 68 (December 1976): 953-958; and Beale, "The Recent Shift of United States Population to Non-metropolitan Areas, 1970-1975," *International Regional Science Review* 2 (Winter 1977): 113-122.

[2]U.S. Department of Agriculture, Economic Research Service, *Population Change in Non-metropolitan Cities and Towns* by Glen V. Fuguitt and Calvin L. Beale. ERS-Agricultural Econ. Report 323 (Washington, D.C.: Government Printing Office, February 1976): 1-15.

[3]D.L. Debertin and E.L. Bradford, "Conceptualizing and Quantifying Factors Influencing Growth and Development of Rural Economics," *Annals of Regional Science*, 10 (March 1976): 29-40.

[4]Steven Kale, "Factors Associated with Population Change in Rural Areas," *Journal of Community Development* 7 (Fall 1976): 41-56.

[5]U.S. Department of Commerce, Bureau of the Census, Current Population Reports. *Population Profile of the United States* Series P20, No. 363 (Washington, D.C.: Government Printing Office, 1981), pp. 1-56; and U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population, "Standard Metropolitan Statistical Area and Standard Consolidated Statistical Areas: 1980," *Supplementary Reports*, PC 80-51-5, (Washington, D.C.: Government Printing Office, 1981), 1-68.

[6]James D. Fitzsimmons, David J. Borchert and John S. Adams, "Recent U.S. Population Redistribution: A Geographical Framework for Change in the 1980s," *Social Science Quarterly* 61 (December 1980): 485-507.

[7]Daniel T. Lichtern and Glenn V. Fuguitt, "The Transition to Non-metropolitan Population Deconcentration," *Demography* 19 (May 1982): 211-221.

[8]Tim B. Heaton and Glenn V. Fuguitt, "Dimensions of Population Redistribution in the United States Since 1950," *Social Science Quarterly*: 61 (December 1980): 508-523.

[9]James A. Chalmers and Michael S. Greenwood, "The Economics of the Rural to Urban Migration Turnaround," *Social Science Quarterly*: 61 (December 1980): 524-544.

[10]John M. Wardwell and C. Jack Colchrist, "Employment Deconcentration in the Non-metropolitan Migration Turnaround," *Demography*: 17 (May 1980): 145-158.

[11]William J. Serow, "The Role of Long Distance Migration in the Rural Renaissance, In Gentrification, and in Growth of the Sunbelt," *The Review of Regional Studies* (Winter 1980): 23-31.

[12]Spencer Bennett and David Bowers, *An Introduction to Multivariate Techniques for Social and Behavioral Sciences* (New York: Wiley, 1976), pp. 95-170; Norman H. Nie, et al., *SPSS: Statistical Package for the Social Sciences* (New York: McGraw, 1975), pp. 434-465.

MANAGING THE PERSONAL SELLING OF ACCOUNTING SERVICES

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INTRODUCTION

There has been a recent proliferation of articles encouraging accountants to accept and use marketing concepts in developing and implementing their respective firm's practice development (marketing)[1] program.[2] The translation of these marketing concepts into successful, client-oriented practice development programs requires an understanding of the special nature of the process of selling and buying accounting services,[3] as well as an understanding of the individual marketing efforts of the accounting professionals. Accounting services can only be sold by the accountants themselves, and certainly the amount of time and effort they devote to selling is a resource which invites careful planning and development. The practice development program should therefore incorporate the answer to questions such as how to:

- inform, educate, persuade, and remind present and prospective clients.
- recognize and evaluate business opportunities for the firm among present and prospective clients.
- convert these opportunities into actual business.

The ability of each individual in the firm to recognize, understand, and handle the above situations relates to the sales management aspects of the practice development program, that is the recruiting, selecting, compensating, and training of the firm's personnel.

The client is not thought of as the target of marketing activity but rather as an entity with problems to be defined and solved. Clients do not hire accountants, they hire the accountant's ability to increase cash flow, reduce inventory costs, decrease or defer taxes, develop audited statements, or define and solve a variety of other problems. The clients' basic motivations may be to make money, reduce operating costs, or to satisfy a legal or social obligation. Clients may not be able to judge the technical competency of the accountant, but they can develop a trust or faith in the accountant's ability to identify, evaluate, and solve their organizations' problems. Certainly the sales approach here is not a predetermined "canned" approach. Rather, it is the opposite. It is a problem-solving, consultative sales approach where opportunities are recognized and the firm's abilities are articulated by the professional who interacts with the prospective client. The professional not only implements the practice development program, but also interprets and even redirects it at the point and time of client contact. Marketing effort consists primarily of the personal effort of each professional, supplemented perhaps by advertising, publicity, office personnel, etc.

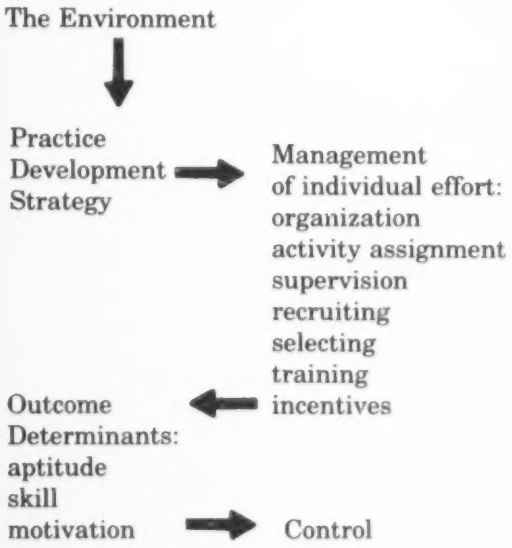
The potential client's decision to engage an accountant is a complex, situational specific, subjective process which cannot be reduced to a simple formula. Each client has situational specific requirements which create a unique buying situation. Market segmentation strategies can be

used to avoid the pitfall of averaging the elements of the practice development program across all clients and all buying situations of a given client. A practice development strategy is developed for each market segment, thereby strengthening and clarifying the firm's competitive position, and better focusing the firm's marketing effort toward subsets of clients with similar needs.

Within each market segment, the retention and expansion of a firm's business depends upon the accountant's ability to inform, educate, and persuade targeted clients as to the value of the firm's service offering and how this offering fits the mosaic of the individual client's special situation. Even though the client's total service purchase possibilities are situational, exactly what the firm's accountants can do and how they can do it can be specified to a large degree.

AN INTEGRATING FRAMEWORK

A framework from which to view the management of the individual's practice development effort can be evolved from the sales literature. The elements of this framework[4] are:



The Environment and Practice Development Strategy

The practice development program should be worked out with the interpretation of the firm's environment in mind. The firm's environment includes present and potential clients, the competition (for example, other accountants, tax preparers, and consultants), the professional and financial resources of the firm, and legal and professional requirements. The accounting firm applies marketing by first identifying, evaluating, and targeting its future potential client base, then designing and pricing a service offering for this projected client base, and last implementing a communications effort to obtain the targeted business. Basically, a planned amount of practice development effort is applied to the defined opportunities for work in the audit, tax, or management assistance areas.

The personal selling aspects of practice development are crucial. No matter how computerized the accounting function becomes, the client will still judge the operation by the interaction with the firm's personnel and how consistently his or her expectations are met by them. It is therefore useful to recognize and understand how individual personal selling effort is managed and what the outcome determinants are.

Management of Individual Effort

The organization of individual effort involves the development of client account management policies and direction as to who is to cultivate whom as well as when and how to do so. Potential accounts are identified and ranked as to likelihood of purchase, and predicted match with the firm's future service offering. For each account the participants in the buying process are identified[5]:

Users - those who actually use the service (e.g., managers).

Influencers - persons who have the ability to provide accepted information to a targeted client (e.g., directors, stockholders, attorneys, bankers, realtors, stockbrokers, and other accountants).

Gatekeepers - those who control information flow to the appropriate decision makers (e.g., secretaries, financial officers).

Buyers - the purchasers of accounting services (e.g., publically held companies, small businesses, government).

Deciders - those who have final authority to authorize purchase (e.g., a senior executive or the Board of Directors).

For **each** targeted client and **its** respective participants, it should be stated who should make the contact and how and when the contact should be made.

Client account management policies consistent with the objectives of the practice development plan guides each stage involving contacts and marketing effort between firm personnel and potential clients:

STAGE 1:
Identifying Clients

Present business:

Who clients are.

What billings are per client, total fees and type of service.

Are fees and billable hours increasing or decreasing?
Collection experience?

Is the client's business growing, static, or shrinking?

What significant clients were lost? Why?

Potential business:

Are current clients using all the services they can?

What new services should be offered? to whom?

Identify potential clients for present services.

Should new market areas be opened? Either geographic (new offices), or particular industry or type of client?

STAGE 2:
Starting and Developing the Relationship

Who is best qualified to contact whom?

How should the process be orchestrated? initial contact, initial service offered to solve what problems?

STAGE 3: Qualifying the Prospect	What are the firm's areas of expertise? How are these clients ranked in terms of likelihood of purchase? profitability to firm? referral potential?
STAGE 4: Presenting the Sales Message	How can the firm's professionals position themselves in business, civic, and social situations so that their expertise can be made known? What are the appropriate ways to make known this expertise?
STAGE 5: Closing the Sale	When and how should the professional ask for business?
STAGE 6: Servicing the Account	Educating the client as to the value of the present service offering and benefits to be obtained from unused offerings of the firm.

The starting point for any action on the part of the professional is to understand the client's perception of both his or her own accounting needs. How does the client view the accounting needs and the accountant's firm. An understanding here gives the accountant an appreciation of where he or she must begin in educating as to the value of the firm's service offering. Shared responsibility by all personnel in the firm for client contact is more important for those firms which have moved from a personality image where the firm's clients focus and rely upon one or two partners, to the development of a corporate image for the whole firm.

The organization and assignment of practice development efforts recognizes that each service offering, client type, and selling function (developing new business or maintaining present business) requires a different personal selling approach in terms of technical knowledge and accountant/client match-up. Professionals should be assigned key accounts, and opportunities for team selling and multi-level selling should be recognized. In an age of specialization it is impossible for an accountant to be a true generalist and be competent in all fields. The need to involve more than one firm member may be necessary in selling situations as well as in the practice of accounting. For example, the design and implementation of a new accounting system for an organization may invite the accountant to team with the computer specialist in making a proposal to the prospect. In another situation a senior partner might establish contact with the top level management of a firm while middle management could be cultivated by the younger partners.

The tendency is to view future market opportunities from the standpoint of the firm's present structure and personnel make-up. To avoid this static approach, activities should be organized rather than personnel.[6] The procedure is (within re-

source constraints) to develop the ideal firm structure to match a projected client base without regard to the talents or preferences of current employees. The projected client base determines the recruiting and training needs of the firm. Such an approach helps the firm avoid over-dependency upon specific individuals and creates an overall firm image instead of a personality image among clients.

The planning of individual practice development effort is important. A predetermined effort to create a quality level, service offering, and client base determines where the firm can progress. Designating responsibility to the professional for achieving these things is also important. To judge achievement, quotas will need to be set for the assigned tasks. Wortruba[7] suggests a three-step process in quota assignment:

(1) Choose the appropriate quota type - the appropriate yardstick may be based on revenue generated, activities (number and amount of effort involved), and/or profitability.
(2) Determine the relative importance of each - this step relates to practice development objectives, e.g., how many new clients? how is each new client ranked in importance to the firm? How much further development of existing clients?
(3) Determine the level of each type of quota - the factors which interplay here related to objectives of the firm, impact of level on individual motivation, and the amount of time the individual is to spend on practice development objectives.

There is no more important function for the firm than recruiting. The firm's future service offering and image directly relate to the successful implementation of a recruiting effort. Recruiting basically involves selling the firm to a targeted group of professionals and/or students. One benefit of projecting a clear, well-known, consistent image of the firm is that a prospective candidate can better qualify himself or herself. The prospective candidate more clearly understands what type of person the firm wants to hire. Also, a larger group of candidates may know of and seek out the firm for possible employment.

The more successful the recruiting efforts are, the larger will be the candidate pool from which to select. Successful selection determines in a large measure, the eventual success of the firm's practice development program. The criteria for selection are drawn from the requirements set forth in the position's job description. Along with technical competency, there are practice development related requirements. Generally, these practice development requirements relate to the social skills, contacts, dress, and verbal skills of the candidate. Here the job description can be specific as to the types of clients, the tasks and responsibilities, the mental and physical attributes, and the relationship to others in the firm that the successful candidate will have in order to fill the firm's position. The firm's future image is largely developed at this point. For an accounting firm, the development of image relates to its ability to solve client problems and the client's perception of the firm's work quality in doing so. The development of image starts and ends with the firm's personnel, and no publicity or advertising effort can undo poor selection.

Because the technical skills are paramount to practice development skills for the professional, training programs become a necessity to develop these skills. Sales training objectives state at the outset what skills should be developed. Basically there is an attempt to improve the communication ability of the professional with the client. Communication skills may include:[8]

COMMUNICATIONS, unwritten	COMMUNICATIONS, written
attitude in client relations	announcements
clients as a source	articles
cold calls	bill board advertising
communication during an engagement	brochures
communication, means of	client bulletins
community, behavior	direct mail
educators, sponsoring of projects	directories
entertaining	educational T.V.
fairs	endorsements
giveaways	help wanted advertisements
image	institutional advertising
marketing yourself	logos
memberships	magazine advertising
name of firm	newspaper advertising
personal contacts	personal notes
personal/professional life	point of purchase displays
personal selling	proposals
person to person communication	publishing by a firm
public office	reminders
public relations	signs
public speaking	slogans
publicity	technical papers
reciprocity	transit advertising
referrals	yellow pages
relatives, use of	
reputation	
retired partners and alumni	
sales training staff	
selection of successful clients	
speakers bureau	
talk shows	
teaching	
team sponsorship	
telephone solicitation	

Each of the above could be a topic of a training session, the timing of which would coincide with the need to booster certain aspects of the practice development program. Training can occur in a variety of ways including—on the job training, classroom, conference/discussion, case analysis, and role-playing.

The professional needs to learn to seek out and recognize both the implicit and explicit needs and expectations of the client. In influencing others, the accountant can choose among several influence strategies:[9]

Reward - e.g., an attempt by the professional to ingratiate the customer by offering him or her desirable entertainment of services.

Referant - e.g., an attempt by the professional to develop a friendly relationship with the buyer.

Legitimate - e.g., the professional stresses his or her reputation or the reputation of the firm.

Expert - e.g., the professional discusses the technical aspects of the service and its applications.

Impression management - e.g., the professional exaggerates the extent to which he or she is bending firm policies to help the client.

Clues must be recognized as to when these strategies can be used and as to whether their use is appropriate.

Incentives set the reward scheme for recognizing appropriate behavior by the firm's personnel. The incentive scheme should parallel the objectives of the firm and its practice development program. Incentives include special recognition, promotion and advancement, encouragement from superiors, incentive bonuses, and overall compensation. For example, leadership on a Chamber of Commerce committee in which an accountant interacts with prospective clients should be recognized by the incentive system of the accountant's firm. Of course, this recognition is granted only if this activity meets the firm's practice development objectives.

It is difficult to find the correct combination of incentives which properly motivate and retain personnel. The market place is everchanging and incentives themselves may lose their motivating power. Basically, the answer here is a dynamic one that goes back to the questions:[10] What does the firm want to accomplish? How does it want to do it? Within what time limit?

Outcome Determinants

Each professional has different levels of aptitude, skills, and motivation to excel at practice development. The firm should recognize the importance of properly rewarding practice development activity because the professional's efforts are related to these rewards and how much he or she wants them. Certainly each professional has a different level of comfort and sophistication when it comes to practice development. Through training this level can be increased. Also, the selection process is able to seek out individuals who can strengthen the practice development program whenever the firm sees an undue weakness in it. There should be an attempt to involve all in some manner in the practice development program, to find the right activity for the right person, and to set up control systems to see that the program is implemented on time and in the proper manner.

CONCLUSIONS

The sales literature should not be ignored when marketing concepts are tapped by accountants in developing their practice development programs. The selling of an intangible such as a service is a difficult, but not a new problem. The training of technicians to sell is also an area where the literature can assist. There is no need to "reinvent the wheel."

[1]Max Block, "Any Limits to Marketing?", *The CPA Journal* 50 (August, 1980) p. 37. There is some resistance to the term marketing by some accountants. For example, Block states that the term marketing is ". . . an import from the mercantile world, smacking of unprofessionalism, and conjuring up the image of the housewife taking a basket under arm to do the daily marketing."

[2]Richard Casavant, "Practice Development: A Marketing Approach," *The National Public Accountant* 26 (May 1981), pp. 7-10; John G. Keane, "The Marketing Prospective: The CPA's New Image," *The Journal of Accountancy* 149 (January 1980), pp. 6-60; Joseph J. Larkin and Marcie B. Sherwood, "Strategic Marketing of Public Accounting Services," *The CPA Journal* 51 (September 1981), pp. 46-51; Edward W. Whetley "Auditing Your Marketing Performance," *Journal of Accountancy* 156 (September 1983): pp. 68-75.

[3]An accounting firm can offer a variety of services in which they perform as auditors, accountants, executive recruiters, merger-makers, tax specialists, small and large business consultants, attorneys, lobbyists, expert witnesses, financial planners, actuaries and a variety of other functions.

[4]Gilbert A. Churchill, Neil M. Ford and Orville C. Walker, Jr., *Sales Force Management: Planning, Implementation, and Control* (Homewood, Ill.: Richard D. Irwin, Inc., 1981), pp. 1-606.

[5]Frederick Webster and Yoran Wind, *Organizational Buying Behavior* (Englewood Cliffs, NI: Prentice-Hall, Inc., 1972), pp. 1-132.

[6]Churchill, Ford and Walker, *Sales Force Management*, pp. 1-606.

[7]Thomas R. Wotruba, *Sales Management: Planning, Accomplishment and Evaluation* (New York: Holt, Rinehart and Winston, Inc., 1971), pp. 1-569.

[8]Susan P. Wisnant, "Marketing CPA Services," *The CPA Journal* 52 (November 1982): pp. 86-87.

[9]Rosanne L. Spiro, "The Personal Selling Process: A Critical Review," *Industrial Marketing Management* 5 (September 1977): pp. 1-364.

[10]Churchill, Ford and Walker, *Sales Force Management*, pp. 1-606.

MEASURING THE SEASONALITY OF ARKANSAS' INSURED LABOR FORCE DATA

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INTRODUCTION

The labor force and employment data referred to most frequently as reflective of the level of economic activity in Arkansas are those prepared by the Arkansas Employment Security Division utilizing the estimating methodology prescribed by the U.S. Department of Labor. These data include series for Total Civilian Labor, Total Employment, Agricultural Employment, Unemployment, and various categories of nonagricultural employment. However, it is generally agreed that another series also published by the Arkansas Employment Security Division, Insured Labor Force[1] data, does not suffer some of the shortcomings associated with the Total Civilian Labor Force data and stemming from the U.S. Department of Labor's estimating methodology.

Both series, Insured Labor Force and Total Civilian Labor Force, are published in **raw** form. The data are **raw** in that they are released without deseasonalization. Consequently, quarter-to-quarter comparisons might be misleading. The purpose of this research was to measure the seasonality in the Insured Labor Force, Covered Employment[2] and Insured Unemployment[3] data and to examine the behavior of the temporal deseasonalized quarterly data sets.

METHODOLOGY

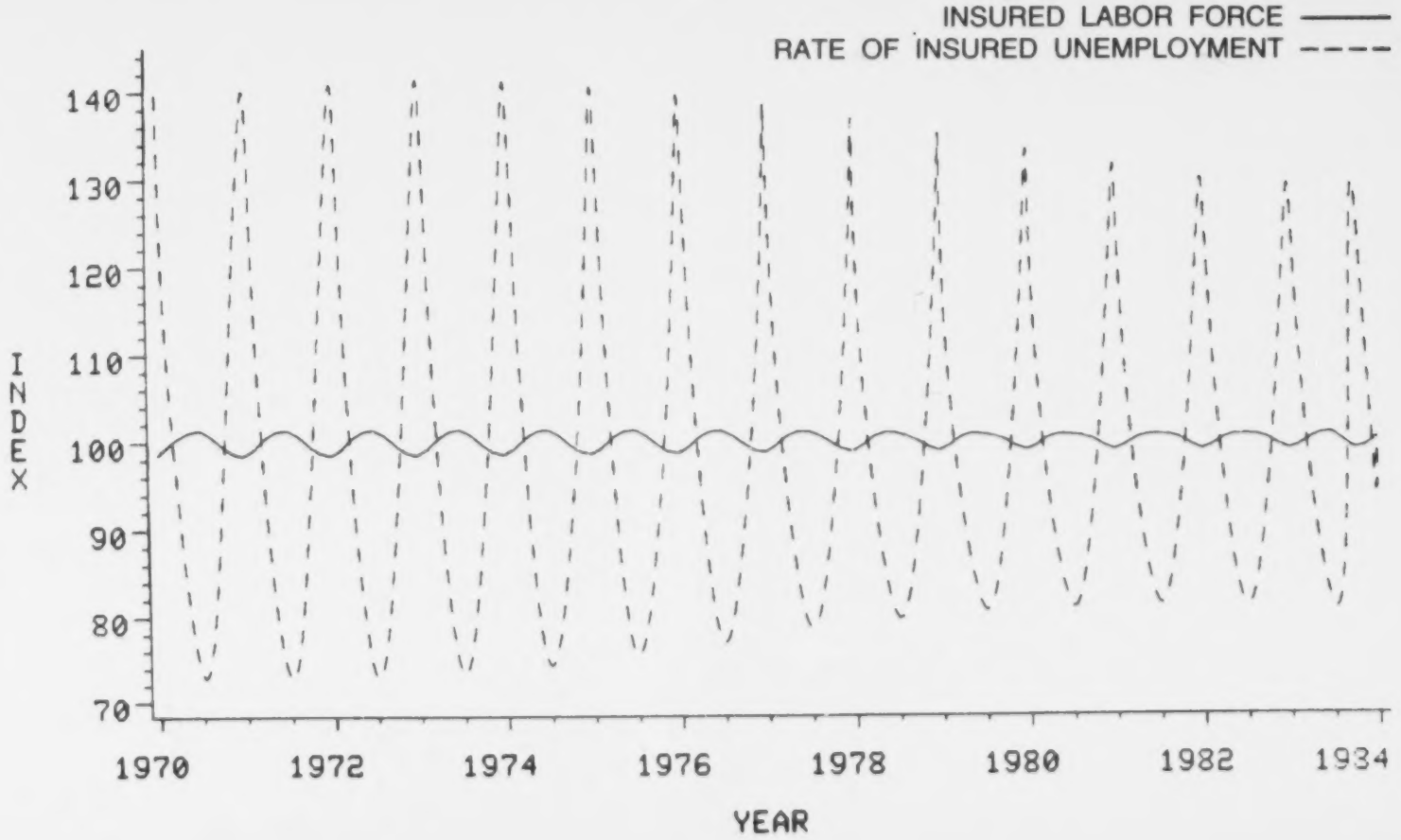
Several alternative methods for measuring seasonality are available. However, the one selected for use in this research was the X11 procedure developed by the Bureau of the Census, U.S. Department of Commerce. The resulting indexes for the Insured Labor Force, Covered Employment, Insured Unemployment, and the Insured Unemployment Rate were developed from 1970-1983 data and are presented in Table 1. These indexes are applicable to 1984 data.

TABLE 1
Arkansas Seasonal Indexes for 1984

1984	Insured Labor Force (%)	Covered Employment (%)	Insured Unemployment (%)	Insured Unemployment Rate (%)
Q-I	99	97	128	129
Q-II	100	101	95	95
Q-III	101	102	81	81
Q-IV	100	100	96	95

FIGURE 1

ARKANSAS SEASONAL INDEXES



ANALYSIS AND FINDINGS

Insured Labor Force

Among its several features, the X11 procedure has the capability to measure the trend evidenced in seasonal indexes. With respect to the Insured Labor Force data, between 1970 and 1983 there was a very slight shift toward a lessening of seasonality. However, it should be noted that even in 1970 there was minimal seasonal variation in the Insured Labor Force data. By 1983, this small variation had been further reduced to a range of variation between quarters of only 2 percent (Figure 1).

The absence of seasonality displayed by these data would tend to dispell the notion that the labor force increased during the summer and declined in the winter, at least as reflected in the Insured Labor Force. Moreover, it also means that these data can be compared on a quarter-to-quarter basis with little fear of distortion.

Covered Employment

While this series exhibits slightly more seasonality, with a seasonal swing of 5 percent, than did the Insured Labor Force, the trend in the indexes was also minimal. The indexes did indicate that the number of covered jobs was at its highest in the period from April through September and that the lowest amount of Covered Employment was typically in the first quarter of the year.

Deseasonalization of the Covered Employment data led to a somewhat altered interpretation of the timing of the 1982 trough of the business cycle. While the national economy troughed in the last quarter of 1982, the Covered Employment data for Arkansas appeared, in **raw** form, to trough in the first quarter of that year, turn up in the second and third quarters, and experience a dip in the last quarter of 1982 and the initial quarter of 1983. However, when the Arkansas Covered Employment data are deseasonalized, the trough is shown as coincidental with that of the nation's business cycle, with a continuous recovery at least through the third quarter of 1983.

Insured Unemployment

While one can determine seasonal indexes for both the number of Insured Unemployed and the Insured Unemployment Rate, this research has focused on the latter. Unlike the data on labor force and employment, the rate exhibits substantial amounts of seasonality and trend within that seasonality. For example, the index for the first quarter of 1984 was 129, a decline from 140 in 1970 (Figure 1).

Both the raw and seasonally adjusted rates are displayed in Table 2. From these data it is readily apparent that the 1982 recession was less severe, as measured by this variable, than the ones which began in either 1974 or 1980.

The similarities, and dissimilarities, of timing between this variable and the peaks and troughs of the national business cycle were also of interest. The Insured Unemployment Rate in Arkansas tended to trough at or before the peak in the national business cycle. In earlier national downturns, 1970 and 1974, Arkansas' unemployment peaked one quarter after the cycle trough. Both in 1980 and 1982, the peak in Arkansas' Insured Unemployment Rate was coincidental with the trough in the national cycle. The described relationship tended to support the conclusion that periods of recession were longer, and recovery was shorter, in Arkansas than for the national business cycle.

TABLE 2
Insured Unemployment Rate
Actual and Seasonally Adjusted (in bold print)
1970-1983

Year	Q-I	Q-II	Q-III	Q-IV
1970	3.60	2.84	2.24	2.94
	2.58	**3.11**	**3.07**	**3.07**
1971	4.37	2.67	2.10	2.43
	3.12	**2.92**	**2.89**	**2.56**
1972	3.39	2.03	1.60	2.24
	2.41	**2.20**	**2.19**	**2.40**
1973	2.96	1.82	1.48	1.67
	2.09	**1.96**	**2.02**	**1.82**
1974	3.25	2.25	2.03	3.97
	2.31	**2.41**	**2.74**	**4.36**
1975	9.45	8.28	5.43	4.36
	6.73	**8.83**	**7.20**	**4.79**
1976	5.03	3.23	3.12	3.72
	3.61	**3.47**	**4.06**	**4.08**
1977	5.03	3.26	2.59	3.34
	3.63	**3.54**	**3.30**	**3.62**
1978	4.95	2.92	2.71	3.35
	3.62	**3.20**	**3.40**	**3.59**
1979	5.46	3.14	2.82	3.49
	4.05	**3.44**	**3.50**	**3.71**
1980	5.75	5.12	5.35	4.89
	4.32	**5.55**	**6.61**	**5.18**
1981	5.97	4.27	3.52	4.80
	4.55	**4.59**	**4.33**	**5.06**
1982	7.20	5.45	5.22	6.05
	5.54	**5.78**	**6.44**	**6.36**
1983	7.41	4.60	3.38	
	5.74	**4.86**	**4.18**	

SUMMARY AND CONCLUSION

Of the three variables analyzed, the Insured Unemployment Rate exhibited the greatest seasonality and appeared to require deseasonalization prior to interpretation. The other two variables can be interpreted quarter-to-quarter in raw form with little fear of distortion. All three variables exhibited trends toward reduction in seasonal variation.

Comparisons of the seasonally adjusted data with the national business cycle indicate some dissimilarities--longer recessions and shorter recoveries—but for the most recent (1982) cycle, the behavior of the two was very near coincidental.

[1]Insured Labor Force is the sum of Covered Employment and Insured Unemployment.

[2]Number of workers employed by firms subject to the Arkansas Employment Security Law. Excludes, among others, unpaid family workers, Federal employees, and agricultural workers.

[3]Total weeks of unemployment compensation claimed each quarter divided by 13.

ECONOMIC EDUCATION: A CONTINUING COMMENTARY

ELECTRICITY PRICES AND CHANGES IN CONSUMPTION

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Increases in energy prices have caused considerable effort to reduce energy consumption. The total demand for some types of energy has been reduced, and the rates of increase for other types have been far below their historical patterns.

Recently, there has been discussion on the concept of a "death spiral" for utilities which maintains that additional increases in natural gas or electric rates will result in even higher rates and the eventual collapse of the industry. In short, the "death spiral" theory works this way: substantial rate **increases** will result in substantial **decreases** in consumption. To recover fixed costs, the revenue lost from the decreased use will cause another rate increase, resulting in even less use, another increase in rates, etc. The scenario ends with very high rates, no sales and a collapsed utility system. It is a very scary story.

Like most such stories, it **could** happen; but the underlying assumptions are wrong; and the story is in direct conflict with reality and experience. Of more importance however, paying attention to it ignores the more serious problems to be solved in the real world of electrical energy in Arkansas today: selling excess capacity.

THE ELASTICITY ASSUMPTION

The first wrong assumption is that substantial rate increases will cause substantial consumption decreases. A basic concept in the theories of supply and demand in economics is that both supply and demand will vary with price. At higher prices, more of anything will be supplied and less demanded (bought, or consumed). At lower prices, less will be supplied and more demanded. That is very logical.

The relationship between price changes and quantity changes (in either supply or demand) is known as **elasticity**. If a small percentage change in the price of electricity (a rate increase) causes a larger percentage change in consumption, then demand is said to be relatively **elastic**—conversely, it is relatively **inelastic** if the percentage change in consumption is smaller than the percentage change in price. The sales of some products are highly affected by prices, others not much at all. If you think of products that are highly taxed—such as cigarettes, liquor, gambling, gasoline, and usually utilities—you are thinking of products with **inelastic** demand, because government found out long ago that taxing these products (thus increasing their prices) would not affect sales (consumption) very much.

For the "death spiral" to work, the demand for electricity or natural gas has to be fairly elastic. So far that is not the case, at least not for electricity. For example:

(1) In my own home in North Little Rock where I have lived for 14 years and put in additional insulation, my changes in electricity costs and consumption have been:

Period	KWH Used	Cost
1969-1971 Average	18,157	$ 329.54
1982-1984 Average	17,895	1,282.86
Change	– 1.4%	289.3%

So my total cost of electricity increased some 289 percent, but my use went down less than 2 percent! My consumption of electricity is **very** inelastic, (– .0048).

(2) AP&L's customers have also had highly inelastic consumption patterns. While prices were increasing 167.6 percent between 1965 and 1983, the average AP&L residential customers actually **increased** their use by 138.7 percent! Commercial customers also increased usage in spite of price increases. Only industrial customers reduced usage—with a price increase of 246.3 percent they reduced consumption by 21.9 percent (so for each 100 percent price increase they cut usage by about 9 percent). To be fair, it should be said that residential and commercial customers did, eventually, react to price increases, although much more slowly than industry. But even then, their elasticity wasn't very high. Between 1978 and 1983, residential prices rose 68.3% and their consumption went down 4.9%. Commercial customer prices rose 44.8 percent yet these customers managed to hold their consumption constant—using no more or less. By this time, industry had made most of the changes it could, however, so a 57.5 percent price increase caused a usage decline of only 1.2 percent.

(3) A recent University of Arkansas study shows that the lumber and wood products industry in Arkansas reported, between 1978 and 1983, an electricity cost per employee increase of 39.9 percent and a usage per employee decrease of 6 percent.[1]

THE "REAL" COST EFFECT

Our parents or grandparents probably could not have afforded dollar loaves of bread, two dollar-plus gallons of milk or twelve thousand dollar-plus automobiles—their incomes were far too low. But incomes have increased along with prices, and except for a few years, incomes have increased more than prices. Regardless of our current problems, nearly everyone in the United States is richer in **real** buying power than they were ten, or twenty or thirty years ago.

The "elasticity" concept in economics is one of those old "everything else being equal" calculations—and unless you allow for changing **incomes**, it just doesn't work—at least not like it's supposed to. Consumers shouldn't be increasing their usage of electricity as the price increases—but has the **real** price been increasing? Take a look:

Arkansas Per Capita Income

1965 $1,832 1983 $8,967 Change + 389.5%

Arkansas Household Effective Buying Income

1965 $5,568 1983 $20,466 Change + 267.6%

Change in AP&L Residential Rates (cents per KWH)

1965 2.56 1983 6.85 Change + 167.6%

Incredible as it may seem, the *real* cost of electricity has gone **down**—so it is logical that we are using more electricity in 1983 than we were in 1965! The death spiral advocates are comparing **real** (actual) usage charges with **nominal** (not inflation adjusted) price changes—the typical apples and oranges fallacy.

PARTS IS PARTS?

Our buying reactions to price changes are also influenced by how important the cost of a product is to our total budget. A 10 percent increase in rent, or mortgage payment, or car prices has a larger impact on our overall budget than a 10 or even 50 percent increase in the price of cereal, eggs, liquor, shoes or most other products. A price change in a large part of our budget is more important than a price change in a small part—parts **ain't** parts.

With regard to industry in Arkansas, the cited University study found that electricity costs were only about 4.6 percent of total operating costs. They were lower than that for some industries, and up to 6 percent of total operating costs for the **Lumber and Wood Products** and **Chemicals and Allied Products** industries.

Thus, a 10 percent electricity rate increase to industry increases its total costs by about 0.5 percent. To make the death spiral work, one has to argue that it is easier to cut electrical consumption by 10 percent than it is to raise prices by 0.5 percent. I do not think so.

ALTERNATIVE SOURCES

The demand for electricity would be more "elastic" if close alternatives or substitutes were available. In most cases, there are no practical alternatives. For industry, however, there is the possibility of relocating plants in other states or even foreign countries. Certainly industry that is expanding would study the electric rates in each area that was being considered for locating a plant.

Several studies of comparative electric rates have shown Arkansas rates are well below the national average however; so the alternative of relocating from Arkansas to other areas isn't a very promosing prospect for industry.[2] In the 1984 study (of 1982 rates), AP&L's industrial electric rates were 12th **lowest** of 99 electric utilities studied. In fact, a part of the problem with the division of costs in the Grand Gulf case is that Arkansas rates are relatively low![3]

It is extremely unlikely that a "death spiral" theory can be justified on the basis of alternative sources of cheaper power. Few, if any, practical cheaper sources exist, and many of these utilities around the nation are far behind AP&L in converting to cheaper coal and/or nuclear fuel, so they have major rate increases yet to come.

REACHING A BREAKPOINT?

What has apparently happened in the natural gas industry is that some high volume gas users, fertilizer production being one of them, faced rates that simply made production using natural gas uneconomical. They hit a "breakpoint" where they either found cheaper gas elsewhere (overseas) or started making the product out of other resources. This problem was more than likely the result of historical **underpricing** of natural gas which allowed a type of production that really should never have existed in the first place.

There may also be some large volume electricity consumers—aluminum production being one—that are older, more expensive, marginal operations—where a breakpoint exists that would cause cessation of production. If so, we may or may not be able to keep rates low enough to continue operation of these industries. If we had reliable estimates of the breakpoint levels, we could consider the relative values of rate subsidies versus losing the industries.

In any case, if the real danger in Arkansas is one of reaching breakpoints for certain industries, the "death spiral" is still not a likely outcome. Any increase in rates caused by a closing industry falls upon users with higher and higher levels of inelastic demand and, given all the foregoing discussion, dissipates fairly quickly.

SELLING EXCESS CAPACITY

Efforts to avoid a "death spiral" that isn't likely anyway simply take time that should be used to solve the real problem. With or without Grand Gulf, considerable excess capacity exists that needs to be sold. Any sales above variable costs of production helps lower rates or rate increases. The problem for the next five to ten years is one of marketing—selling what we already have.

We should be particularly interested in selling long-term off-peak power and should create special, lower rates to do it, although even on-peak sales are needed for some time. The Public Service Commission and the utilities need to be more committed to finding innovative rate structures and industries that can take advantage of them.

Today's excess capacity can be viewed as an enormous asset. What we really want to do is get the industry and jobs, sell the power, and quicken our need for the lignite plants. Negative discussion about non-existent "death spirals" won't help us reach those goals.

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[1]Phillip Taylor and Mary S. Hirsch, *Analysis of the Significance of Electrical Energy Costs to Industrial Establishments in Arkansas*, University of Arkansas, Bureau of Business and Economic Research, College of Business Administration, Fayetteville, November 27, 1984.

[2]See *Arkansas Electric Utility Rates*, by Stanley Boyle and Ralph Shull, Industrial Research and Extension Center, University of Arkansas, October, 1982 and *An Examination of Arkansas Electric Utility Rates and Capacity Considerations*, by the same authors, March, 1984

[3]*Other States Covet Arkansas Ratepayers*, Ernest Dumas, ARKANSAS GAZETTE, December 2, 1983.

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

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THE ARKANSAS ECONOMY: RECENT PERFORMANCE AND OUTLOOK

Phillip Taylor
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After a strong third quarter in 1984, growth in Personal Income in Arkansas was below the national average in both the final quarter of the year and the initial quarter of 1985. The preliminary estimate indicates Personal Income grew at a 1.7 percent rate in the second quarter but that growth rate was still substantially below the average for 1984. While the economic signals continue to be mixed nationally, it appears that economic activity in Arkansas will be slowing somewhat for the remainder of the year.

The civilian labor force (seasonally adjusted) declined from 1,040,580 in May 1984 to 1,028,340 in May 1985. In that same period, total employment (seasonally adjusted) rose by almost 4,000. This increase, along with the larger decline in the labor force, brought about a seasonally adjusted decline in the unemployment rate to the level of 7.4 percent in May 1985.

Employment, both wage and salary in manufacturing and agricultural when seasonally adjusted, declined between May 1984 and May 1985. In the latter month, wage and salary employment was below the average levels of 1980, 1981 and 1984.

Value Added by Manufacture grew at a seasonally adjusted rate of 2.1 percent in the first quarter of 1985, very close to the average growth rate in 1983 and 1984. After a disappointing first quarter, the value of Arkansas Construction Contracts, both residential and nonresidential, increased sharply in the second quarter of this year. While this increase is most probably a response to lower interest rates, it appears unlikely that aggregate construction activity for the year will equal that for 1984.

Data on Cash Receipts from Farm Marketings in 1984 reflected very little improvement over 1983 and were below 1981 and 1982 levels. No data are yet available for Arkansas in 1985 but Cash Receipts nationally declined by 4.2 percent in the first quarter.

Traffic on the McClellan-Kerr Arkansas River Navigation System in the first half of 1985 indicates little increase, and perhaps a decline, when compared with the previous year. In addition, both savings and new loans of Arkansas Savings and Loan Associations in the first quarter of 1985 were generally below 1984 levels.

In summary, while the Arkansas economy is continuing to enjoy expansion, the rates of growth have been somewhat lower in recent quarters. With the existence of several negative indicators, little further improvement in economic activity is expected for the remainder of 1985.

LABOR FORCE AND EMPLOYMENT
ARKANSAS

(Seasonally adjusted)

Year	Month	Civilian Labor Force	Total Employment	Agricultural Employment	Manufacturing Wage and Salary Employment	Unemployment Rate (Percent)
1980		999,000	923,000	65,100	210,050	7.6
1981		1,030,000	936,000	64,100	212,100	9.1
1982		1,018,000	919,000	63,440	195,625	9.7
1983		1,016,100	920,730	62,395	199,880	9.5
1984		1,044,000	951,000	61,600	209,750	8.9
	May	1,040,580	947,690	61,700	209,740	8.8
	June	1,041,210	953,210	61,610	208,920	8.9
	July	1,038,460	943,560	61,610	209,690	9.0
	Aug.	1,045,860	952,420	61,520	210.850	8.8
	Sept.	1,049,210	952,730	61,440	210,820	9.1
	Oct.	1,054,120	955,220	61,310	210,750	9.3
	Nov.	1,053,700	955,600	61,200	208,820	9.3
	Dec.	1,057,410	959,550	61,160	213,850	9.3
1985						
	Jan.	1,018,890	936,760	61,180	214,930	8.1
	Feb.	1,009,010	928,820	60,930	213,840	8.3
	March	1,012,970	932,510	60,940	211,860	8.1
	April	1,022,730	941,610	60,860	207,420	7.9
	May	1,028,340	951,240	60,700	209,000	7.4

PERSONAL INCOME

Quarterly Changes in Personal Income, Arkansas and United States

(Seasonally adjusted, Percent)

	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III	1984 Q-III thru 1984 Q-IV	1984 Q-IV thru 1985 Q-I
Arkansas	+ 2.6	+ 3.8	+ 0.9	+ 2.9	+ 0.9	+ 1.1
United States	+ 2.6	+ 2.9	+ 2.1	+ 2.1	+ 1.6	+ 1.5

Personal Income in Arkansas

(Seasonally adjusted, annual rate, Millions of dollars)

	1978	1979	1980	1981	1982	1983	1984	1985
Quarter								
I	12,790	14,640	15,892	17,862	19,118	20,212	22,321	23,629
II	13,206	14,774	15,851	18,078	19,317	20,522	22,514	24,035[P]
III	13,798	15,208	16,527	18,811	19,447	20,968	23,165	
IV	14,102	15,640	17,005	18,912	19,922	21,505	23,369	
Annual	13,474	15,066	16,319	18,416	19,451	20,802	22,842	

[P] = preliminary estimate

INDUSTRIAL PRODUCTION

Quarterly Changes in Industrial Production
Arkansas and United States

(Seasonally adjusted, Percent)

	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III	1984 Q-III thru 1984 Q-IV	1984 Q-IV thru 1985 Q-I
Arkansas	+ 3.7	+ 0.9	+ 1.2	+ 1.2	+ 2.1
United States	+ 2.7	+ 2.1	+ 1.6	− 0.6	+ 0.5

Value Added by Manufacture in Arkansas

(Seasonally adjusted annual rate, Millions of dollars)

	1978	1979	1980	1981	1982	1983	1984	1985
Quarter								
I	5,272.9	5,915.7	6,523.2	7,158.6	7,427.7	7,859.4	8,772.0	9,256.3
II	5,503.3	6,037.5	6,390.0	7,358.6	7,514.9	8,089.0	8,848.2	
III	5,612.0	6,119.5	6,633.7	7,565.0	7,492.9	8,322.1	8,952.7	
IV	5,703.7	6,268.1	6,896.7	7,568.0	7,674.1	8,458.5	9,064.6	
Annual	5,523.0	6,085.2	6,610.9	7,412.5	7,527.4	8,182.2	8,909.4	

CASH RECEIPTS FROM FARM MARKETINGS

Quarterly Changes in Cash Receipts, Arkansas and United States

(Seasonally adjusted, Percent)

	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III	1984 Q-III thru 1984 Q-IV	1984 Q-IV thru 1985 Q-I
Arkansas	+ 0.4	− 2.0	− 22.1	+ 30.2	− 3.7	NA
United States	− 10.7	+ 4.5	+ 3.5	+ 6.4	− 2.8	− 4.2

NA - Not Available

Cash Receipts from Farm Marketings in Arkansas

(Seasonally adjusted, Thousands of dollars)

	1977	1978	1979	1980	1981	1982	1983	1984
Quarter								
Jan-Mar	686,105	915,305	931,511	961,705	823,428	868,250	675,728	826,869
Apr-Jun	703,457	705,441	719,506	658,942	909,757	881,841	638,833	644,064
Jul-Sep	578,357	760,304	762,307	879,485	1,011,547	800,923	840,884	838,541
Oct-Dec	500,169	584,144	663,304	570,684	692,029	772,552	843,988	807,631
Annual	2,468,088	2,965,194	3,081,628	3,070,816	3,436,761	3,323,566	2,999,433	3,117,105

ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

Quarterly Changes in Activity of Arkansas S & L Associations

(Not seasonally adjusted, Percent)

	1983 Q-III thru 1983 Q-IV	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III	1984 Q-III thru 1984 Q-IV	1984 Q-IV thru 1985 Q-I
Total New Loans	− 4.7	+ 17.9	− 41.5	− 17.3	+ 5.2	− 25.1
Net Savings Change	+ 38.3	+ 15.5	− 6.1	+ 0.7	+ 5.3	− 61.2

Economic Activity of Arkansas Savings and Loan Associations

(Not seasonally adjusted, Thousands of dollars)

Time Period	Total New Loans	Net Savings Change
	Current $	Current $
1978	729,300	416,900
1979	625,900	436,830
1980	504,700	287,600
1981	360,800	20,000
1982	677,400	353,800
1983	2,370,300	1,446,300
1984	1,836,600	1,075,000
Q-II	416,900	260,100
Q-III	344,800	262,000
Q-IV	362,600	276,000
1985 Q-I	271,600	107,100

WATERBORNE COMMERCE:
McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Quarterly Changes in Total and Internal Tonnages

(Not seasonally adjusted, Percent)

	1983 Q-IV thru 1984 Q-I	1984 Q-I thru 1984 Q-II	1984 Q-II thru 1984 Q-III	1984 Q-III thru 1984 Q-IV	1984 Q-IV thru 1985 Q-I	1985 Q-I thru 1985 Q-II
Total	+ 25.8	+ 3.7	+ 6.1	− 16.6	− 12.2	+ 8.9
Internal	− 2.9	+ 38.0	+ 15.8	− 34.3	− 40.6	+ 119.2

Freight Traffic
Arkansas River Commerce

(Not seasonally adjusted, Thousands of short tons)

Time Period	Traffic Tonnages			
	Inbound	Outbound	Internal	Total*
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981	1,564	5,684	1,741	9,446
1982	1,520	4,611	1,561	8,258
1983	1,918	3,905	1,904	8,017
1984	2,128	4,264	2,433	9,490
Q-III	602	1,108	773	2,575
Q-IV	439	1,087	508	2,147
1985 Q-I	434	909	302	1,885
Q-II	660	607	662	2,053

*Total tonnage includes "through traffic."

ARKANSAS CONSTRUCTION CONTRACTS

Residential Construction Contracts

(Seasonally adjusted, Thousands of dollars)

	1977	1978	1979	1980	1981	1982	1983	1984	1985
Quarter									
Jan-Mar	160,861	220,739	205,119	144,050	176,180	115,590	206,450	242,890	194,290
Apr-Jun	173,558	236,915	153,917	137,600	159,750	153,850	240,380	255,210	297,150
Jul-Sep	182,210	227,633	193,364	177,450	138,360	174,250	231,250	228,310	
Oct-Dec	217,222	236,718	154,130	185,450	158,510	204,440	228,180	191,140	
Annual	733,851	922,005	706,530	664,550	632,800	648,130	906,260	917,550	

Nonresidential Construction Contracts

(Not seasonally adjusted, Thousands of dollars)

	1977	1978	1979	1980	1981	1982	1983	1984	1985
Quarter									
Jan-Mar	57,486	72,851	88,988	72,300	90,500	96,300	69,500	108,500	87,800
Apr-Jun	63,726	60,479	109,976	91,200	72,700	54,700	90,900	112,200	104,000
Jul-Sep	67,632	90,471	70,296	91,900	59,400	72,000	89,500	125,000	
Oct-Dec	76,866	69,041	112,549	99,700	79,500	56,600	120,200	122,000	
Annual	265,710	292,842	381,809	355,100	302,100	279,600	370,100	467,700	

LABOR FORCE ESTIMATES
April 1985
(PLACE-OF-RESIDENCE BASIS)

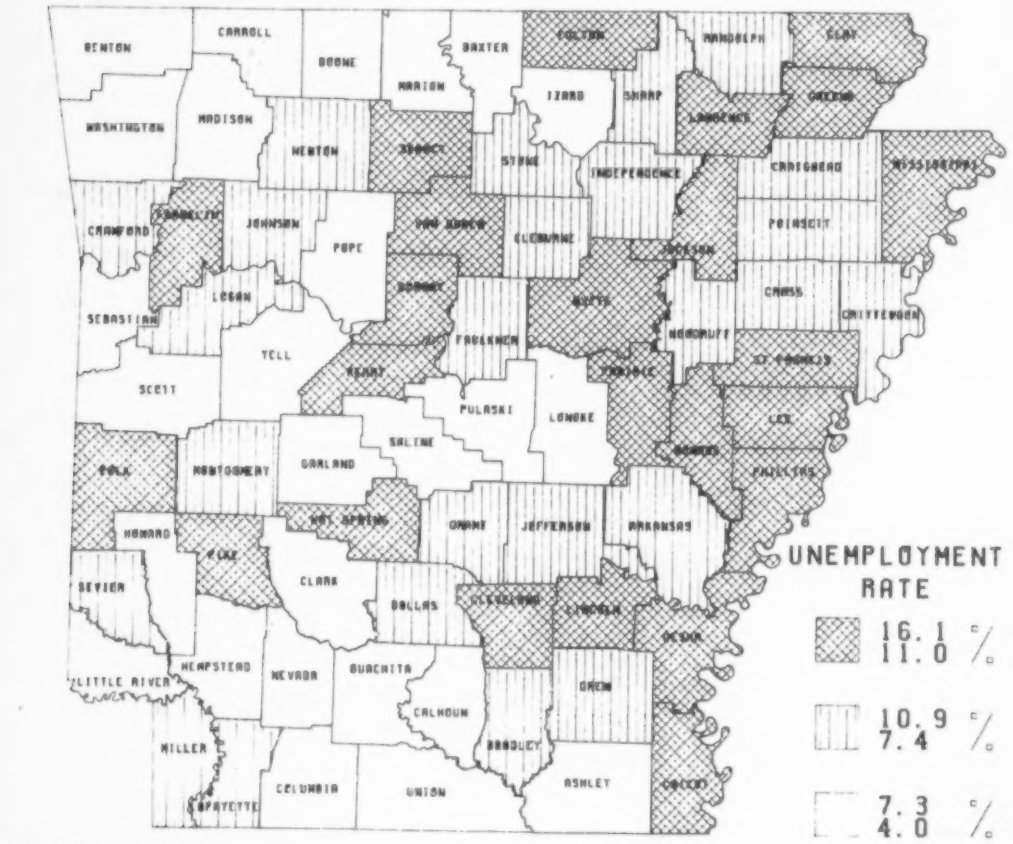
State and MSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES	114,325,000	7.1	106,175,000
STATE OF ARKANSAS	1,023,100	7.9	941,900
Fayetteville-Springdale MSA (Washington County)	48,575	4.0	46,650
Fort Smith MSA (Crawford & Sebastian Counties in Arkansas and Sequoyah County in Oklahoma)	81,250	7.6	75,050
Little Rock-North Little Rock MSA (Faulkner, Lonoke, Pulaski & Saline Counties)	227,500	5.9	214,175
Pine Bluff MSA (Jefferson County)	37,725	7.8	34,775

County	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	11,075	9.3	10,050	Lee	4,675	15.0	3,975
Ashley	10,425	7.2	9,675	Lincoln	3,725	14.8	3,175
Baxter	10,375	6.5	9,700	Little River	6,425	6.2	6,025
Benton	38,125	5.2	36,125	Logan	7,500	10.7	6,700
Boone	13,850	6.1	13,000	Lonoke	16,725	5.4	15,825
Bradley	4,900	10.2	4,400	Madison	6,025	6.2	5,650
Calhoun	2,725	6.4	2,550	Marion	6,425	4.7	6,125
Carroll	9,450	5.8	8,900	Miller	16,650	7.4	15,425
Chicot	6,450	12.0	5,675	Mississippi	24,975	12.1	21,950
Clark	10,350	6.8	9,650	Monroe	4,750	13.7	4,100
Clay	8,675	14.7	7,400	Montgomery	2,625	9.5	2,375
Cleburne	7,300	8.6	6,675	Nevada	4,125	7.3	3,825
Cleveland	1,700	13.2	1,475	Newton	2,300	10.9	2,050
Columbia	13,750	5.8	12,950	Ouachita	14,250	7.0	13,250
Conway	7,825	16.0	6,575	Perry	3,050	14.8	2,600
Craighead	30,850	7.6	28,500	Phillips	12,175	12.3	10,675
Crawford	18,700	7.5	17,300	Pike	3,750	13.3	3,250
Crittenden	24,425	8.5	22,350	Poinsett	10,200	10.0	9,175
Cross	8,575	9.6	7,750	Polk	5,500	13.2	4,775
Dallas	3,900	9.0	3,550	Pope	18,650	6.6	17,425
Desha	7,375	13.2	6,400	Prairie	3,775	11.3	3,350
Drew	8,050	10.6	7,200	Pulaski	161,400	5.3	152,850
Faulkner	23,250	8.5	21,275	Randolph	7,125	10.9	6,350
Franklin	5,700	13.6	4,925	St. Francis	12,850	16.1	10,775
Fulton	2,950	13.6	2,550	Saline	26,125	7.3	24,225
Garland	31,850	6.8	29,700	Scott	4,075	6.7	3,800
Grant	4,075	10.4	3,650	Searcy	2,825	11.5	2,500
Greene	13,775	11.4	12,200	Sebastian	46,500	7.2	43,150
Hempstead	10,500	7.1	9,750	Sevier	6,325	8.3	5,800
Hot Spring	10,675	12.2	9,375	Sharp	4,475	10.1	4,025
Howard	8,050	5.6	7,600	Stone	3,625	8.3	3,325
Independence	16,050	7.6	14,825	Union	23,025	7.3	21,350
Izard	4,350	6.3	4,075	Van Buren	4,350	11.5	3,850
Jackson	9,125	14.2	7,825	Washington	48,575	4.0	46,650
Jefferson	37,725	7.8	34,775	White	23,350	11.0	20,775
Johnson	9,050	8.3	8,300	Woodruff	4,400	10.8	3,925
Lafayette	3,350	7.5	3,100	Yell	7,975	5.6	7,525
Lawrence	8,500	11.2	7,550				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

LABOR FORCE ESTIMATES
APRIL 1985

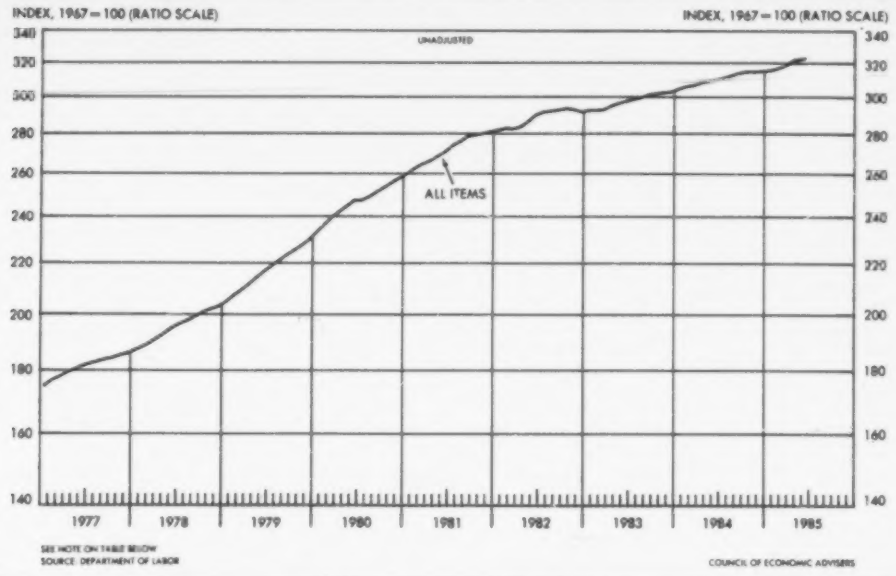
IN APRIL, ARKANSAS' CIVILIAN LABOR FORCE INCREASED BY 17,000 TO TOTAL 1,023,100. TOTAL EMPLOYMENT INCREASED 24,100 TO TOTAL 941,900. UNEMPLOYMENT FELL BY 7,100 TO TOTAL 81,200. OF THE 75 COUNTIES, WASHINGTON HAD THE LOWEST UNEMPLOYMENT RATE AT 4.0 PERCENT AND ST. FRANCIS, HIGHEST AT 16.1 PERCENT. MOREOVER, THE UNEMPLOYMENT RATES IN 43 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. FOR THE SMSAS, FAYETTEVILLE - SPRINGDALE HAD THE LOWEST UNEMPLOYMENT RATE AT 4.0 PERCENT AND PINE BLUFF HAD THE HIGHEST RATE AT 7.8 PERCENT. THE RATES FOR THE LITTLE ROCK-NORTH LITTLE ROCK AND THE FORT SMITH SMSAS WERE 5.9 AND 7.6 PERCENT, RESPECTIVELY.



UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

CONSUMER PRICES

In June, the consumer price index for all urban consumers rose 0.2 percent seasonally adjusted (0.3 percent not seasonally adjusted). The index was 3.7 percent above its year earlier level.



[1967 = 100, except as noted; monthly data seasonally adjusted, except as noted]

Period	All items [1] NSA	Food	Housing						Apparel and upkeep	Transportation			Medical care	Energy [4]	All items less food, energy, and shelter
			Total [1]	Shelter				Fuel and other utilities		Total [1]	New cars	Motor fuel [3]			
				Total	Renters' costs [2]	Homeowners' costs [2] NSA	Maintenance and repairs NSA								
Rel. imp. [5]	*100.0*	*18.7*	*37.7*	*21.8*	*7.1*	*14.1*	*0.5*	*8.2*	*5.1*	*21.6*	*3.4*	*5.5*	*6.3*	*11.5*	*48.0*
1977	181.5	192.2	186.5	191.1	.....	.....	214.7	202.2	154.2	177.2	142.9	188.2	202.4	207.3	169.5
1978	195.4	211.4	202.8	210.4	.....	.....	233.0	216.0	159.6	185.5	153.8	196.3	219.4	220.4	179.1
1979	217.4	234.5	227.6	239.7	.....	.....	256.4	239.3	166.6	212.0	168.0	265.6	239.7	275.9	191.5
1980	246.8	254.6	263.3	281.7	.....	.....	285.7	278.6	178.4	249.7	179.3	369.1	265.9	361.1	208.3
1981	272.4	274.6	293.5	314.7	.....	.....	314.4	319.2	186.9	280.0	190.2	410.9	294.5	410.0	228.1
1982	289.1	285.7	314.7	337.0	.....	.....	334.1	350.8	191.8	291.5	197.6	389.4	328.7	416.1	245.6
1983	298.4	291.7	323.1	344.8	103.0	102.5	346.3	370.3	196.5	298.4	202.6	376.4	357.3	419.3	258.4
1984	311.1	302.9	336.5	361.7	108.6	107.3	359.2	387.3	200.2	311.7	208.5	370.7	379.5	423.6	271.2
1984: June	310.7	301.5	335.0	359.9	108.2	106.8	358.9	385.8	198.4	312.5	207.4	371.8	379.1	423.6	270.9
July	311.7	302.6	336.8	362.5	108.8	107.6	360.3	389.0	198.9	311.8	208.2	365.2	380.9	422.0	271.7
Aug	313.0	304.2	338.5	364.1	109.4	108.1	360.1	391.1	200.5	311.8	209.1	361.7	382.0	421.5	272.9
Sept	314.5	304.4	340.2	366.0	109.9	108.7	362.7	392.6	201.5	312.8	210.2	364.6	383.6	423.7	273.9
Oct	315.3	305.4	340.5	367.4	110.4	109.1	361.6	390.3	203.0	313.9	210.8	367.4	385.8	423.4	274.7
Nov	315.3	305.9	341.2	368.6	110.9	109.4	362.9	390.4	202.7	314.5	210.6	369.3	387.4	424.0	275.2
Dec	315.5	307.2	341.8	370.1	111.4	109.8	364.4	389.4	202.4	315.0	210.9	368.8	389.0	423.0	275.9
1985: Jan	316.1	307.7	342.3	371.0	111.8	110.0	366.0	389.1	202.4	315.8	211.6	363.8	390.3	419.8	277.2
Feb	317.4	309.3	343.7	373.2	112.4	110.7	366.8	388.1	204.3	315.6	213.3	354.2	392.0	414.1	278.7
Mar	318.8	309.2	344.6	374.2	112.9	110.8	370.0	389.8	205.3	319.7	214.3	367.6	395.3	422.1	279.9
Apr	320.1	308.7	345.9	375.7	113.5	111.3	368.0	392.0	205.4	322.3	214.3	378.7	397.5	429.9	280.4
May	321.3	308.3	348.1	379.4	114.6	112.4	366.2	392.7	205.2	321.6	213.9	380.5	399.9	431.2	280.5
June	322.3	308.5	349.2	380.9	115.1	112.8	367.6	395.0	205.8	321.2	214.5	381.3	402.6	431.9	281.1

[1] Includes items not shown separately.
[2] December 1982 = 100.
[3] Includes direct pricing of diesel and gasohol beginning September 1981.
[4] Fuel oil, coal, and bottled gas; gas (piped) and electricity; and motor fuel. Motor oil, coolant, etc. also included through 1982.
[5] Relative importance, December 1984.

NOTE.—NSA indicates data are not seasonally adjusted.
Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.
Data beginning 1983 incorporate a rental equivalence measure for homeownership costs and therefore are not strictly comparable with figures for earlier periods.
Source: Department of Labor, Bureau of Labor Statistics.

EDITOR'S NOTE

As a part of the continuing effort to enhance the quality of the *Review*, the research staff of the Bureau of Business and Economic Research is engaged in a program of work directed toward improving the "Economic Indicator" data series. At this time, work has been completed on personal income, employment and value added by manufacture statistics. As subsequent issues of the *Review* are released, further improvements in the series will be announced.

Beginning with the modified series in this issue, data will be published, where possible, in a seasonally adjusted, annual rate format. Thus, it will appear in a form consistent with that in which national data are ordinarily published. While the complete historical series will not be published in this format, they will be available upon request.

It should be noted that the most substantial revisions in the modified data series included in this issue are in the value added by manufacture data. The newly developed estimating equation captures price changes and also appears to have much higher statistical reliability than the equation previously utilized. Inclusion of price changes, in particular, contributes to substantially higher new estimates than those published previously.

The staff, as always, welcomes comments and suggestions for further improvement.

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